

The Relationship of Teacher Induction Programs to Job Satisfaction of Early Career Teachers

By

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Submitted to the graduate degree program in the Department of Educational Leadership and Policy Studies and the Graduate Faculty of the University of Kansas in partial fulfillment of the requirements for the degree of Doctor of Education.

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## ABSTRACT

The purpose of this study is to examine the relationship of new teacher induction programs to the job satisfaction of early career teachers. This study utilized data from the 2003-2004 Schools and Staffing Survey (SASS) of the National Center for Education Statistics. In this current study, 5,435 teachers in their first, second, or third year of teaching were identified and several variables were analyzed to explore their job satisfaction in relation to induction program participation. Results revealed a positive relationship between job satisfaction of new teachers and induction program participation and a positive relationship between participation in an induction program and if they would re-enter the profession if they could do it over.

Research has indicated that there exists a strong link between the perennially high rates of beginning teacher attrition and the teacher shortages that seem to perennially plague schools. Current studies show that teacher turnover rate is increasing, and that although all occupations experience some loss of new entrants, teachers are leaving the profession at a rate that outpaces most other professions. An analysis of national data has shown that widely publicized school staffing problems are not solely – or even primarily – the result of too few teachers being recruited and trained. Instead, the data indicates that school staffing problems are to a significant extent a result of a revolving door, where large numbers of teachers depart teaching long before retirement.

## ACKNOWLEDGEMENTS

“Lead me, follow me, or get out of my way.”—General George S. Patton

If you would have told me fifteen years ago, when I started my career in education, that I would someday want to be a school administrator, I might have socked you in the face. Or in the very least, stared at you in disbelief and told you that you were wrong. It wasn't that I was reluctant to take a leadership role; I had known many of them in my short time in the Army and a longer period in the National Guard. And I had earned a reputation as a teacher-leader within my school. I wanted to be a leader, but a leader on the ground with the rest of the troops. I had no aspirations to become the brass.

Now that I am a school administrator, I have peers that can regale an audience with stories of a fantastic school administrator that inspired them. I also have stories, but mine come with a twist. After a few years of witnessing poor leadership and administration, I found myself one afternoon complaining to other teachers. I suppose I might have complained once too often as one of my colleagues said to me, “Mike, why don't you get your principal degree, find a job, and do it better.”

And I did. Even though I was finishing a master's degree at one university, I enrolled at another university and began taking courses in building leadership. For a full academic year, I attended both universities as a fulltime graduate student. And in the pursuit of my own learning, I became the best teacher I had ever been. A few short years later I decided to pursue a doctorate in school leadership.

However, sometimes life happens. I got a job as an assistant principal and became a large part of bringing freshmen to what had historically been a three-year high school. My son graduated high school, started college, and in all honesty, graduated from college while I began to lose my dream of a doctorate. But as things ebb and flow, so does personal ambition. Although my “clock” in winding down, I decided that I can still earn a doctorate before my alarm rings.

I would like to thank all my teachers for helping to make me into the educator I am today. I owe a debt of gratitude to the fine professors from whom I have been privileged to learn as a graduate student in the Department of Educational Leadership and Policy Studies. I specifically want to thank Dr. McKnight for his global perspective on curriculum, Dr. Ebmeier for showing me perspective about human resources, Dr. Imber for giving me a thirst for school law, Dr. Perkins for reminding me just where the rubber meets the road, and Dr. Saatcioglu for introducing me to topics about which I still talk today.

I would also like to thank my son Caylor and my daughter Kassidi for supporting my learning when I was supposed to be supporting theirs. And I want to thank them for their responses when I would message them to let them know that I was staying at work late to work on my dissertation. *“It’s about time.”* I should thank my boss, Dr. Matt Brungardt, for his constant harassment to finish.

And finally, I want to thank my wife Melissa for giving me unconditional support.

Thank you all.

## TABLE OF CONTENTS

ABSTRACT.....	iii
ACKNOWLEDGEMENTS.....	iv
LIST OF TABLES.....	viii
1.0 PROBLEM STATEMENT.....	1
2.0 LITERATURE REVIEW.....	6
2.1 Challenges of Beginning Teachers.....	6
2.1 Teacher Induction.....	11
2.3 Job Satisfaction.....	13
2.4 Summary.....	18
3.0 METHODOLOGY.....	20
3.1 General Overview.....	20
3.2 Data Sources.....	20
3.3 Sample Information and Methodology.....	21
3.4 Summary.....	30
4.0 RESULTS.....	32
4.1 General Overview.....	32
4.2 General Data.....	32
4.3 Analysis of Data: Demographic Characteristics of Teachers.....	39

4.4 Analysis of Data: Logistic Regression Analyses.....	40
4.5 Analysis of Data: Linear Regression Analyses.....	45
4.6 Analysis of Data: Independent Samples T-tests.....	49
4.7 Discussion of Findings.....	52
4.7 Summary.....	56
5.0 DISCUSSION.....	57
5.1 Overview.....	62
5.2 Study Implications.....	64
5.3 Limitations.....	68
5.4 Conclusions.....	70
APPENDICES AND REFERENCES.....	71
Appendix A: SASS Questionnaire.....	72
Appendix B: Weighted Responses by Age.....	75
Appendix C: Weighted responses by Race.....	78
Appendix D: Logistic Regression Analysis of Satisfaction at School and Induction Program Participation.....	80
Appendix E: Logistic Regression Analysis of Would Do Again and Induction Program Participation.....	86
References.....	92

## LIST OF TABLES

TABLE 3.1: Independent and Dependent Variables.....	23
TABLE 3.2: Teacher Satisfaction.....	25
TABLE 3.3: Logistic Regression Analysis of Variables.....	27
TABLE 3.4: Independent Samples T-tests.....	28
TABLE 3.5: Independent Samples T-tests.....	29
TABLE 3.6: Independent Samples T-tests.....	30
TABLE 3.7: Independent Samples T-tests.....	30
TABLE 4.1: Years in Public Schools.....	33
TABLE 4.2: Number of Teachers Who Participated in an Induction Program .....	33
TABLE 4.3: Gender and Age.....	34
TABLE 4.4: Race.....	35
TABLE 4.5: Degrees Earned.....	36
TABLE 4.6: Grade Level Taught.....	37
TABLE 4.7: Base Salary.....	38
TABLE 4.8: Logistic Regression Analysis of Satisfaction and Induction Program Participation.....	43
TABLE 4.9: Logistic Regression Analysis of Choose to Teach Again and Induction Program	



Participation.....	44
TABLE 4.10: Linear Regression Analysis of Satisfaction and Induction Program Participation.....	47
TABLE 4.11: Linear Regression Analysis of Choose to Teach Again and Induction Program	
Participation.....	48
TABLE 4.12: Two-sample T-Test: Induction, by (Stayers/Leavers).....	50
TABLE 4.13: Two-sample T-Test: Satisfaction at School, by (Stayers/Leavers).....	51
TABLE 4.14: Two-sample T-Test: Would Do Again, by (Stayers/Leavers).....	52

## **1.0 Problem Statement**

Since the mid-1980s beginning teacher induction programs have spread like wildfire throughout U.S. schools. Although these programs look different in different states and even different schools, their intent seems to remain the same; the programs emphasize beginning teacher support in efforts to increase job satisfaction. Nationally, millions of dollars are spent on induction programs, but there is scant evidence that the job satisfaction of beginning teachers is increasing.

Historically, the teaching occupation has not had the kind of structured induction and initiation processes common to many white-collar occupations and characteristic of the traditional professions. However, in recent years there has been a growth in the support, guidance, and orientation programs—collectively known as induction—for beginning elementary and secondary teachers during the transition into their first teaching jobs. While the specifics of such programs vary widely, their intent is to increase confidence and effectiveness, and thus stem the high levels of attrition among beginning teachers.

All occupations, of course, experience some loss of new entrants – either voluntarily because newcomers decide to not remain or involuntarily because employers deem them to be unsuitable. But teaching has long had alarmingly high rates of attrition among newcomers. Several studies have found between 40-50% of new teachers leave within the first five years of entry into the occupation (Ingersoll & Smith, 2003). In the analysis of the attrition rate factor, Ingersoll (2003) reports that attrition rates of other occupations in 2000-2001 averaged 11.9% while education attrition rates were 15.7%. Moreover, several studies have found a significant

correlation between a teacher's likelihood of retention and their scores on exams such as the SAT (Ingersoll & Kralik, 2004). The "best and the brightest" appear to be those most likely to leave.

Although elementary and secondary teaching involves intensive interaction with youngsters, the work of teachers is largely done in isolation from colleagues. This can be especially difficult for new entrants who, upon accepting a teaching position in a school, are often left on their own to succeed or fail within the confines of their own classrooms – an experience likened to being "lost at sea." Indeed, critics have long assailed teaching as an occupation that "cannibalizes its young" and in which the initiation of new teachers is akin to a "sink-or-swim," "trial-by-fire" or "boot-camp" experience.

Recent research also has documented what many educators have long suspected – a strong link between the perennially high rates of beginning teacher attrition and the teacher shortages that seem to perennially plague schools (Ingersoll & Kralik, 2004). An analysis of national data has shown that widely publicized school staffing problems are not solely – or even primarily – the result of too few teachers being recruited and trained. Instead, the data indicates that school staffing problems are to a significant extent a result of a revolving door, where large numbers of teachers depart teaching long before retirement (Ingersoll & Kralik, 2004). A link has been established between job satisfaction and intent to leave the job (Hellman, 1997). In a quantitative study, Hellman found job satisfaction "consistently predicts turnover intentions." This has necessitated that schools across the nation must implement programs to increase job satisfaction with early career teachers.

These are the kinds of occupational ills that effective organizational induction programs are supposed to address and, accordingly, in recent decades a growing number of states and school districts have developed and implemented a variety of such programs. Teacher induction, it is important to clarify, is distinct from both pre-service and in-service teacher training programs. Pre-service refers to the training and preparation candidates receive prior to employment (including clinical training such as student teaching). In-service refers to periodic upgrading and additional training received on the job, during employment. Theoretically, induction programs are not additional training per se, but are designed for those who have already completed basic training. These programs are often conceived as a “bridge” from student of teaching to teacher of students. Of course, these analytic distinctions can easily become blurred in real situations.

The overall objective of teacher induction programs is to provide newcomers with a local guide, but the regarding character and content of these programs themselves widely vary. Duration and intensity are one set of variables; mentoring programs can vary from a single meeting between mentor and mentee at the beginning of a school year, to a highly-structured program involving frequent meetings over a couple of years between mentors and mentees who are provided with release time from their normal teaching schedules.

Programs also vary per the numbers of new teachers they serve. Some include anyone new to a school, even those with previous teaching experience, while others focus solely upon inexperienced candidates new to teaching. In addition, programs vary per their purpose. Some are primarily developmental and designed to foster growth on the part of newcomers; others are also designed to assess, and perhaps weed out, those deemed ill-suited to the job.

The kinds of induction programs that exist, and under what circumstances they help are clearly fundamental questions for the educational field and for policymakers faced with decisions about supporting such programs. With the growth of induction and mentoring programs, there also has been a growing interest in empirical research on the variety and effects of these initiatives. Over the past two decades, numerous studies have been done on a variety of different types of programs. In turn, education advocates and reformers frequently cite examples drawn from this research to secure additional funding, to garner political support or to confirm a particular educational perspective (Ingersoll & Kralik, 2004; Smith & Ingersoll, 2004).

It is unclear, however, how much of this research warrants unambiguous conclusions about the value added by induction programs. Some studies appear to lack methodological rigor and draw conclusions that reach beyond what their data truly support. And there has been little research investigating possible negative effects of induction. Moreover, the content, duration and delivery of programs are so varied from one site to another that it is not clear to what extent general conclusions about induction can be drawn from the existing research.

Losing good teachers is not only a staffing issue; it is also a significant expense to school districts. For example, per Cartolano (2006), in a study centered on Texas, researchers found that annual financial losses of between \$329 million and \$2.1 billion in were partly attributable to the high turnover of new teachers, which turnover averaged 15.5 percent. Cartolano says evidence shows that spending a few thousand dollars per new teacher on a high-quality teacher induction program would be less costly than the current attrition rates faced by many states and districts. School districts almost always need additional funds and face budget constraints.

The impact of attrition on school budgets is a consideration for school districts to design programs to reduce the loss of good teachers.

Faced with the loss of qualified teaching staff and the fiscal challenges that it brings to schools, researchers need to explore several causes of these problems and, if appropriate, propose solutions. Some of the questions that researchers might pose are:

1. What are schools doing to retain early career teachers?
2. Why do early career teachers leave the profession at higher rates than occurs in other professions?

However, only one question remains as the focus of this study:

Is there a positive correlation between participation in a teacher induction program and job satisfaction?

Currently, there is need for assessment of the existing empirical research on teacher induction to determine its scope and merit, and the conclusions that might be drawn from it. To be sure, several useful reviews of theory, research and policy on teacher induction have been published. But, to date, there has been no comprehensive and critical review of existing empirical studies on induction programs.

## **2.0 Literature Review**

A large body of literature on effective beginning teacher induction programs and the unique challenges of beginning teachers provides a basis for this study. This section will present a systematic review of related literature regarding teacher induction, the challenges of beginning teachers, job satisfaction, and teacher attrition.

### *2.1 Challenges of Beginning Teachers*

The beginning years of a teacher's career are an exceptionally challenging and crucial time (Gold, 1996; Huling-Austin, 1990; Walsdorf & Lynn, 2002). Although several researchers have developed a list of the challenges that beginning teachers face, each list varies in length and is presented in a slightly different rank order. Veenman (1984), in a comprehensive review of 83 studies on the needs and challenges of beginning teachers, cited the top ten challenges of beginning teachers as: classroom discipline, motivating students, dealing with individual differences, assessing students' work, relationships with parents, organization of class work, insufficient and/or inadequate teaching materials and supplies, dealing with problems of individual students, heavy teaching loads resulting in insufficient teacher preparation time, and relations with colleagues. Odell's list (1989) included ideas about instruction, personal and emotional support, resources and materials for teaching, information about school policy and procedures, and techniques for classroom discipline. Gordon and Maxey (2000) cited managing the classroom, acquiring information about the school system, obtaining instructional resources and materials, planning organizing, and managing instruction, assessing and evaluating student progress, motivating students, using effective teaching methods, dealing with individual

students' needs, communicating with colleagues, communicating with parents, adjusting to the teaching environment, and receiving emotional support. In 2003, Renard studied the major concerns of beginning teachers, and found them to be classroom management, student motivation, meeting individual students' needs, assessment and evaluation, and successfully communicating with parents.

When hired, beginning teachers are faced with the same responsibilities and duties as their seasoned colleagues. They are no longer student teachers in someone else's classroom, yet are still learning how to teach. Often, beginning teachers are considered finished projects that simply need fine-tuning, when in fact they have legitimate learning needs. Feiman-Nemser (2003) stated that three or four years are required to reach competency in the teaching profession, and several more to reach proficiency. Unfortunately, the first year of teaching historically has been, and often continues to be, considered a rite of passage into the profession (Rogers & Babinski, 2002). Halford (1998) stated that when compared with other professions such as medicine and law, which recognize the needs of their beginning professionals, the field of education has been dubbed "the profession that eats its young."

Renard (2003) stated that most seasoned veterans can relate some type of horror story about their first years of teaching, and view surviving these first few years as a badge of honor. Thus, some veteran teachers may not feel compelled to assist beginning teachers, and expect them to endure the same painful process that they endured to become properly initiated into the profession. Brock and Grady (2001) stated that beginning teachers typically like the school environment, have been successful as students, and have entered the career of teaching because they enjoyed learning. School has been a comfortable place for them. When they



enter this once familiar world in the new role as teacher, they often experience reality shock, and their bubble of idealism soon bursts. Veenman (1984) defined “reality shock” as “the collapse of the missionary ideals formed during teacher training by the harsh and rude reality of classroom life.” Beginning teachers walk into the classroom with enthusiasm and confidence; however, once they sit behind the other side of the desk for a few months, their perspective changes. They often regard typical first-year teacher problems as personal failures and quickly become discouraged (Brock & Grady, 2001).

Although beginners have a certain degree of experience and knowledge regarding the art of teaching, when they are hired they are not finished products that simply need a few finishing touches. Teacher education programs provide opportunities for a broad range of field experiences, including the student teaching practicum; however, the first year of teaching is quite different from field experiences. Beginning teachers must learn to develop a professional identity and navigate a new school culture, so may feel frustrated when expectations are not made clear to them (Gordon & Maxey, 2000). Schools have sets of rules, procedures, routines and customs that cannot be learned in the initial orientation sessions at the beginning of the school year.

Beginning teachers often suffer from “information overload” and may become confused or will forget important information that is discussed in beginning teacher orientation sessions. There are several unwritten rules, customs and routines of the school that can be learned only through experience and trial and error. To make matters more complicated, different groups of people such as administrators, parents, students, and other teachers have different expectations, leading to what Corcoran called “the condition of not knowing” (1981).

Renard (2003) stated that beginning teachers are learning to become experts in their subject matter and therefore are often just one step ahead of their students. In some instances, beginners are handed the keys to their classroom, a textbook, and a few remaining worksheets from last year, and are then expected to develop their own curriculum, sometimes for several subjects. When beginners are left to their own devices in the early years of teaching, they are unlikely to grow. Any early satisfaction with their work, which is unfortunately too often the result of trial and error, has little chance of being sustained (Danielson, 2002).

Beginning teachers also experience high feelings of isolation and loneliness. When beginning teachers join a close-knit staff where friendships and social groups are already formed and the shared history and norms of the school are unknown to them, it becomes a challenge to become part of the school community (Brock & Grady, 1995, 2001; Sergiovanni, 1995). If the faculty has been together for a long time, it is difficult for the newcomer to feel a part of things. Beginning teachers are initially welcomed and politely spoken to, but not necessarily included or assisted. Johnson et al. (2004) found that in the worst scenarios, veteran teachers hoarded books, materials, or lesson plans; dismissed or ridiculed novices' ideas; sabotaged any efforts to improve; and constantly complained or criticized.

The nature of teaching itself can be lonely, not only for beginning teachers, but for all teachers. Little (1990) referred to the typical school as "a series of individual classrooms connected by a common parking lot." Teachers are physically separated from each other for most the school day, and thus, particularly beginning teachers feel alone. Unlike other professions where colleagues and supervisors provide daily feedback, teachers must most often

rely on their students to provide them with feedback and acknowledge their small, daily successes (Brock & Grady, 2001). Feiman-Nemser (2003) found that beginning teachers may feel reluctant to share problems or ask for help, believing that no one else is experiencing difficulties, and make the assumption that good teachers figure things out on their own. Walsdorf and Lynn (2002) stated that beginning teachers want to make a good first impression, so when classroom problems do arise they are hesitant to ask their seasoned colleagues for assistance, fearing that seeking help or advice may be perceived as a sign of incompetence, which deepens their feelings of isolation and loneliness as well as creating feelings of inadequacy.

Brock and Grady (1998) suggested that beginning teachers not only need to be surrounded by a supportive network of experienced colleagues, but also need a principal upon whom they can rely and trust. Beginners look to veteran teachers for help and advice, but they also view their principal as a key source of support and guidance. Principals are recognizing the need that new teachers have for advice and help, and are making efforts to provide the necessary support. Induction programs that include beginning teacher mentoring programs are one such form of support, and have been shown to be highly effective in the induction of beginning teachers into the profession, as well as being instrumental in the retention of beginning teachers (Darling-Hammond, 2003; Evertson & Smithey, 2000; Feiman-Nemser, 1996; Gold, 1996; Little, 1990).

## *2.2 Teacher Induction*

Teacher induction is the period of transition from student to professional when first-year teachers are offered supervision and support as they adjust to their new roles (Blair-Larsen, 1998). A good induction program should be reactive to beginning teachers' needs and reflective of positive educational strategies. According to Recruiting New Teachers, Inc. (2000), a teacher induction program socializes beginning teachers into the teaching profession, acclimates them to the procedures and mores of the school district and their individual school, as well as aids in the development of effective instructional and classroom management skills. Induction is a distinct phase in the professional development of a teacher. It extends beyond the first year, and occurs in three stages: survival/discovery, experimentation/consolidation, and mastery/stabilization (Mutchler, 2000). Teacher induction programs generally focus on the survival/discovery stage and provide initial support to beginning teachers by meeting their immediate needs and guiding their transition into the classroom.

Although beginning teacher induction programs vary greatly in their length, breadth, and scope, effective ones share a well-defined set of common goals and method of induction. Effective induction programs must also be oriented to meet the situational needs of beginning teachers (Brock & Grady, 2001). Several studies have shown that goals of an effective induction program can include but are not limited to transitioning beginning teachers into their new environment; improving teaching performance and skills; promoting the personal and professional well-being of beginning teachers; helping beginning teachers develop their own self-image, positive attitude, and concern for students; helping beginning teachers understand their responsibilities as classroom teachers; building a foundation for continued professional

growth; retaining competent teachers; satisfying state mandated requirements related to induction programs; and ensuring that the school system receives the benefits of a well-trained employee as quickly as possible the following (Brock & Grady, 2001; Gregory, 1998; Fox & Singletary, 1986; Huling-Austin, 1986).

A comprehensive induction program does not consist of a crash course or one-time orientation. A comprehensive induction program is not a top-down approach and it is not merely a mentoring program (Alliance for Excellent Education, 2004). It does not follow a top down approach nor is it the only solution to an ineffective or dysfunctional school. An induction program that is comprehensive in nature builds a community of learners and increases teacher efficacy (Alliance for Excellent Education, 2004). The professional development aspect of a comprehensive induction program is designed to teach both clinical and practical skills necessary to develop effective teachers (Alliance for Excellent Education, 2004). It also facilitates professional learning and collaboration among colleagues. A comprehensive Induction program should be regarded as a process, not just a program (Wong, 2004).

According to Darling-Hammond et al. (1999), as of 1990, approximately 50% of all beginning teachers in the United States were participating in a beginning teacher induction program. According to Smith and Ingersoll (2004), 10 years later this figure had increased to 80%. Most states mandate beginning teacher induction in some form; however, some induction programs may not be comprehensive, and may consist of as little as a one-day orientation, a casual assignment of a teacher “buddy,” periodic workshops, or instruction in generic classroom management (Gold, 1996). Other programs do not include feedback on

teaching, a formal evaluation process, or targeted training (Fideler & Haselkorn, 1999). Less than 1% of teachers get what the Alliance for Excellent Education (2004) refers to as a “comprehensive” induction package, which would include a reduced number of course preparations, a helpful mentor in the same field, a seminar tailored to the needs of beginning teachers, strong communication with administrators, and time for planning and collaboration with other teachers.

It is important for school districts to focus on the job satisfaction of early career teachers. Studies tie job satisfaction directly to teacher retention and student performance. Studies also show that induction programming has a crucial role in increasing teacher satisfaction.

### *2.3 Job Satisfaction*

Job satisfaction can be defined as “[the way that] people feel about their jobs and different aspects of their job” (Spector, 1997). Job satisfaction “is any combination of psychological, physiological, and environmental circumstances that causes a person truthfully to say, ‘I am satisfied with my job.’ An employee may be satisfied with one facet of his/her job and dissatisfied with another” (Hoppock, 1935). Hoppock also noted that individuals may rationalize their level of job satisfaction, and the degree of satisfaction may fluctuate from day to day. Job satisfaction has been a topic of interest to both people who work in organizations and people who study them. In fact, “it is the most frequently studied variable in organizational behavior research” (Spector, 1997). Organizations should work to foster job satisfaction among

their employees, because it can lead to the improved performance of employees, which can influence positively the overall operation of the organization (Spector, 1997).

The most widely accepted explanation of job satisfaction was presented in 1976 when it was defined job satisfaction as “a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences” (Locke, 1975). Additionally, job satisfaction has emotional, cognitive and behavioral components. The emotional component refers to feelings regarding the job, such as boredom, anxiety, or excitement. The cognitive component of job satisfaction refers to beliefs regarding one's job, for example, feeling that one's job is mentally demanding and challenging. Finally, the behavioral component includes people's actions in relation to their work. These actions may include being tardy, staying late, or pretending to be ill to avoid work.

A 2005 study of job satisfaction among teachers in China established a connection between teachers’ job satisfaction, job performance, commitment to the profession, and job motivation (Sargent & Hannum, 2005). The study also notes that teachers who tend to be dissatisfied are linked with attendance issues and attrition rates. Similarly, Ingersoll (2003) stated that nearly 50% of teacher turnover is linked to feeling unsatisfied with the job and a desire for a better job or different career. Additional reasons teachers attributed to dissatisfaction included “low salaries, lack of support from administration, discipline problems, and lack of influence over decision-making” (Ingersoll, 2003).

A lack of support can lead to teacher frustration and ultimately increase the likelihood of leaving the profession. A study conducted in 2004 revealed that teachers who stay in the

profession “exist in a supportive professional environment” in which some new teachers may not have the opportunity to work (Inman and Marlow, 2004). Others note that new teachers must be in a supportive environment to grow and learn (Woods & Weasmer, 2002). In an article written in 2008, education is described as a profession that “eats its young” (Anhorn, 2008). This same article suggests there is a “sink or swim” mentality in education, and new teachers are often not provided the support necessary to succeed in the classroom.

Hellman (1997) revealed a connection between job satisfaction and the intent to leave the profession. George and Jones (1996) indicated that job satisfaction, combined with value attainment and a positive mood, also contributes to retention. Williams and Hazer’s (1986) study revealed that job satisfaction associated with organizational commitment played a key role in the intent of employees to leave the profession.

There is little doubt that job satisfaction plays a pivotal role in the likelihood of a teacher remaining in the profession. The link between job satisfaction and an employee’s intent to leave the job has a well-established body of research. The Mobely model (Lee, 1988) developed in the late 1970s suggests that job dissatisfaction, which may lead to employee attrition, is a process. Lee (1988) replicated Mobely’s process to determine correlative significance and his findings indicate “job satisfaction significantly contributed to explain variance in the intention to quit.” De Moura, Abrams, Retter, Gunnarsdottir and Ando (2009) also indicated a correlation between job satisfaction and the prediction of attrition.

Ingersoll and Smith (2003) suggested that teacher shortages are not so much because of too few college students entering the field of education, but may be due to beginning teachers



leaving the profession because of early disillusionment and dissatisfaction. They contend that the challenge of retaining highly qualified, promising new teachers does not necessarily lie in the number of beginning teachers available, but in keeping the ones that are hired.

Teacher job satisfaction can also directly influence instructional quality (National Center for Education Statistics, 1997). When teachers are satisfied with their job, then they are typically motivated to work harder. In turn, this leads to an increase in student learning and achievement. Positive working conditions also facilitate student learning through teacher empowerment, establishing a safe learning environment, and promoting a supportive school climate (Hirsch, Emerick, Church, & Fuller, 2006). These qualities of job satisfaction directly affect teacher retention by reducing turnover rates.

Perhaps it is too much to expect teacher induction alone to possibly impact the job satisfaction of early career teachers. In her study in 2003, Darling-Hammond found four major factors that influence whether teachers migrate or leave the profession entirely: salary, working conditions, preparation, and mentoring in the early years of teaching. Nationwide, the salary gap between teachers and their non-teaching peers is significant, with teacher salaries being approximately 20% lower than other professions with comparable training. In high-poverty schools the gap is wider: about one third less than teacher salaries in low-poverty schools. These districts also typically have fewer resources and poorer working conditions (NCES, 1997).

Graduates who do pursue education as a career, unlike most other careers, enter a field where compensation is not based on performance; therefore, offering little extrinsic motivation for high achievement. Although inadequate salary is a contributing factor to teacher

dissatisfaction, several studies have shown that poor working conditions are another significant factor (Danielson, 2002; Ingersoll, 2001; Inman & Marlow, 2004). Feiman-Nemser (2003) found that whether beginning teachers experience their introduction to teaching as a time of constructive learning or as a period of coping and survival, depends mainly on the working conditions and teaching community they encounter.

A 2007 study, using data from the 1999-2000 SASS, revealed new teachers felt least prepared around classroom management (National Center for Education Statistics, 2007). Results from NCES's Teacher Attrition and Mobility Survey indicated that teachers who left the profession altogether felt that they have less of a "work load" in their current profession than they did during the years they spent teaching (as cited in Marvel, Lyter, Peltola, Strizek & Morton, 2007).

Another study conducted to examine attrition rates of teachers and administrators of the Pacific Islands schools identified several factors that impacted teachers wishing to leave the profession (Pacific Resources for Education and Learning, 1998). In response to if they planned to leave the profession in the next two years, 20.4% of the surveyed teachers indicated their intent to leave. The top three indicators included "poor working conditions, no support from school administration, and no support from central office" and other indicators the leavers cited were "too much stress, students' bad attitudes, too many disagreements about how to teach, not enough materials and supplies, and too many responsibilities" (Pacific Resources for Education and Learning, 1998).

Lack of administrative support, not being part of the decision-making process, as well as inadequate resources all contribute to teachers' decisions about remaining in the profession or

relocating to another district (Darling-Hammond, 2000, 2003; Ingersoll, 2001). School districts vary greatly in the amount of support that beginning teachers receive based on the funds available. Wealthier school districts have more resources available, smaller class sizes, and smaller pupil loads per teacher (NCES, 1997).

In the field of education, there are many studies about teacher job satisfaction. Teachers' high turnover rates and their desire to leave the profession have resulted in public schools facing a shortage of teachers (Otto & Arnold, 2005). Research shows that high job satisfaction resulted in a low rate for teachers leaving their professions (Ingersoll, 2003). Studies also find that teachers with high job satisfaction could bring more enjoyment and motivation to both schools and students, resulting in increased student success (Demirtas, 2010).

#### *2.4 Summary*

To support beginning teachers, most districts offer some sort of induction program, but are often provide a limited set of services in response to an unfunded state mandate and with modest local resources (Ingersoll & Smith, 2004). Sometimes this induction is low-intensity and informal, but often in efforts to better prepare early career teachers and to increase their general job satisfaction, comprehensive induction programs that are intensive and structured are delivered.

There is a body of research that links job satisfaction and intent to leave, and current practices related to beginning and new teacher support. There are several support strategies to increase teacher retention rates, including providing opportunities for job satisfaction through various

professional development support mechanisms such as teacher induction programs and assignment of mentor teachers.

There is a need for researchers to explore new teacher induction program participants and their job satisfaction, which is assumed to lead to higher retention rates for staff. This study must be conducted to equip school districts and state education departments with the proper research necessary to determine whether funds will be used to create, maintain, and improve teacher induction programs and the assignments of mentor teachers.

### **3.0 Methodology**

#### *3.1 General Overview*

The purpose of this study is to determine if there is a positive correlation between participation in teacher induction programs and job satisfaction. Because of the established link between job satisfaction and employee retention, the long-term objective of the research is to counteract potential teacher shortages and decrease money lost to districts by teachers leaving early in their careers. It was determined that a predictive, quantitative study is important in the identification of potential predictor variables in the work environment that could increase job satisfaction of quality teachers.

This study employs a quantitative design using a large data set from a national database—the National Center for Educational Statistics (NCES). The purpose of the study is to identify relationships and themes that are suggested in the literature and to examine them in terms of induction program participation and job satisfaction. The literature clearly indicates that job satisfaction is linked to retention (Hellman, 1997), and that satisfaction is important in predicting whether teachers will remain on the job (De Moura, et al, 2009).

#### *3.2 Data Sources*

This study uses data obtained through the National Center for Educational Statistics. Under the direction of the United States Department of Education, the NCES provides data that is used by a variety of researchers in all levels of governmental agencies, academic organizations, news media, businesses, and the public. It collects, analyzes, and houses the educational data from the United States and is considered a prominent source for educational

research data. Restricted-use data from the Schools and Staffing Survey (SASS), particularly the Teacher Questionnaire in 2003-2004, is analyzed to examine variables of interest. The Teacher Follow-up Survey (TFS) in 2004-2005 is also used.

The SASS has been used for the past twenty-five years to collect data specific to elementary and secondary school systems in both the public and private sectors. The Schools and Staffing Survey is a nationally representative sample survey of public, private, and Bureau of Indian Education-funded K-12 schools, principals, and teachers in the fifty states and the District of Columbia. The teacher survey was designed to support comparisons between new and experienced teachers at the state level for public school teachers and at the regional or affiliation level for private school teachers (SASS, 2003).

### *3.3 Sample Information and Methodology*

The data used in this study is obtained from the NCES through the SASS in 2003-2004 and the TFS in 2004-2005; for the SASS, NCES surveyed 43,244 public school teachers from 4,441 public school districts across the United States during the 2003-2004 school year. The TFS is a follow-up survey administered to some of the SASS respondents; NCES surveyed a subsample of 7,429 current and former teachers in 2004-2005 school year. By isolating teachers within the first three years on the job, the total number of teachers included in this study was 5,435. Despite the number of years that a teacher might have taught overall, no teachers were included that started teaching before the 1999-2000 school year.

Once early career teachers were identified three distinct phases of data analysis were conducted. The first phase includes the gathering of general information about the teachers

and their school characteristics. The second phase includes the logistic regression analyses that are used to explain the relationships between the variables of induction program participation with job satisfaction and retention. The final phase includes two-stage T-tests used with TFS data to understand how teachers that left the profession compared to those that stayed in terms of induction participation and other measures of satisfaction.

The variables analyzed in phase one include the demographic and school characteristics of the sample teachers. The purpose of this first phase was to understand the sample population. Specifically, teacher information is collected to gain general descriptive data about the sample. This phase analyzed teacher characteristics, including: gender, age, race, number of years teaching, degrees awarded, grade level taught, salary, and participation in an induction program. Table 3.1 indicates the input variables and the manners in which data was tabulated.

Table 3.1

**Independent Variables**

#	General teacher characteristic variables of sample population	
1	Induction Program Participation (T0216)	A dichotomous variable where 1 = Yes and 2 = No.
2	Gender	A dichotomous variable where 1 = Male and 2 = Female.
3	Age	A continuous variable measuring the age of survey participants.
4	Year Teaching	A nominal variable where 1 = 1 <sup>st</sup> year, 2 = 2 <sup>nd</sup> year, and 3 = 3 <sup>rd</sup> year.
5	BA/BS Awarded	A dichotomous variable where 1 = Yes and 2 = No.
6	MA/MS Awarded	A dichotomous variable where 1 = Yes and 2 = No.
7	Grade Level Taught	A nominal variable where 1 = Elementary and 2 = Secondary.
8	Salary	A continuous variable measuring the base salary of survey participants.



The primary purpose of the initial data analysis was to understand the percentage of respondents that participated in induction programs. The second purpose of this analysis was to gain descriptive understanding of the teachers included in the survey. Additional tabulations were also performed to understand the general level of satisfaction of the teachers in the sample population. Table 3.2 identifies these variables.

The respondents were asked satisfaction questions in the SASS questionnaire concerning: supportive administration, influence over school policy, classroom control, the problem of poverty at the school, supportive parents, positive recognition for a job well-done, teacher satisfaction at school, and would re-enter the profession if the respondent could do it all over again. The corresponding questions for each area are identified in parentheses and can be found in Appendix A.

**Table 3.2**

**Teacher Satisfaction**

1	Supportive School Administration	Dichotomous variable where 1 = Yes and 2 = No.
2	Influence over School Policy	
3	Control over Classroom	
4	Poverty Problem	
5	Supportive Parents	
6	Positive Recognition	
7	Satisfaction at School	
8	Would do Again	

This phase of the data analyses focuses on the determination of predictor variables. This study centers on the influence of induction program participation on job. Therefore, the independent variable is induction program participation and the dependent variables include satisfaction teaching at school and whether the teachers would reenter the profession (both likely measures of general job satisfaction).

There are two reasons to conduct a logistic regression analysis—prediction and explanation. Logistic regression is used to describe data and to explain the relationship between one dependent binary variable and one or more continuous-level (interval or ratio

scale) independent variables. Like all linear regressions, the logistic regression is a predictive analysis. This study performed a multinomial logistic regression analysis to predict if participation in an induction program has a positive correlation with job satisfaction. The logistic regression analyses were conducted using the same SASS data from 2003-2004 as in the phase one tabulations. The independent variable is participation in an induction program and is considered a dichotomous measure where the number 1 designates all respondents who had participated in an induction program; the number 2 designates all other respondents. The dependent variables included (a) satisfaction teaching at school and (b) would they go into the profession if they could do it all over again.

Tables 3.3 and 3.4 identify the dependent and independent variables in the logistic regression analyses. In both tables the questions asked of the respondents on the SASS questionnaire, are coded in parenthesis. The first SASS question used in Table 3.3 states, "I am generally satisfied being a teacher at this school." The second question the SASS question used asks, "If you could go back to your college days and start over again, would you become a teacher or not?"

Besides induction participation, the other variables measured against the above questions in the data analysis included: gender, age, BS/BA awarded, MA/MS awarded, grade level taught, and salary. The question in parentheses corresponds to the question on the 2003-2004 SASS survey for public school teachers in their first, second or third year in the profession.

**Table 3.3****Logistic Regression Analysis of Variables**

Teachers at the school are generally satisfied (T0350)	
<i>Dependent Variable</i>	<i>Independent Variables</i>
Satisfaction teaching at school	Induction participation Gender Age Year Teaching BA/BS Awarded MA/MS Awarded Grade Level Taught Salary Supportive School Administration Influence over School Policy Control over Classroom Poverty Problem Supportive Parents Positive Recognition

**Table 3.4****Logistic Regression Analysis of Variables**

Teachers would re-enter the profession if they could do it over (T0382)	
<i>Dependent Variable</i>	<i>Independent Variables</i>
Would re-enter the profession	Induction participation Gender Age Year Teaching BA/BS Awarded MA/MS Awarded Grade Level Taught Salary Supportive School Administration Influence over School Policy Control over Classroom Poverty Problem Supportive Parents Positive Recognition

The third phase of data analysis is going to focus on data taken from the 2004-2005 TFS.

The Teacher Follow-up Survey (TFS) is a follow-up survey administered to a sub-population of

the elementary and secondary school teachers who participated in the previous year's Schools and Staffing Survey (SASS). The TFS sample includes teachers who left teaching (leavers) in the year after the SASS data collection and those who continue to teach (stayers). According to the 2004-2005 TFS, the teachers left the profession the year after the SASS was administered numbered 2,653. Because teachers are assigned a control number, this study could identify 199 leavers and 808 stayers from the original sample of the 5,435 teachers early career teachers.

Tables 3.5, 3.6, and 3.7 identify the variables included in the two-sample t-tests that will be run to compare a sub-population of "leavers" with a sub-population of leavers. The t-tests will compare the means of each sub-category with regards to the following variables: participation in an induction program, satisfaction at school, and would they do it again. Although the purpose of this study is to strictly determine the relationship, if any, that participation in teacher induction has to the general job satisfaction of teachers, the t-test will speak towards the link between job satisfaction and teacher retention.

**Table 3.5**

**Two-sample T-test: Induction, by (Stayers/Leavers)**

Did you participate in a teacher induction program? (T0216)	
<i>Dependent Variable</i>	<i>Independent Variable</i>
Stayers/Leavers	Induction participation

**Table 3.6**

**Two-sample T-test: Satisfaction at School, by (Stayers/Leavers)**

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<b>Teachers at the school are generally satisfied (T0350)</b>	
<i>Dependent Variable</i>	<i>Independent Variable</i>
Stayers/Leavers	Satisfied at school

---

**Table 3.7**

**Two-sample T-test: Would Do Again, by (Stayers/Leavers)**

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<b>Teachers would re-enter the profession is they could do it over (T0382)</b>	
<i>Dependent Variable</i>	<i>Independent Variable</i>
Stayers/Leavers	Do again

---

**3.4 Summary**

There are three phases of the data analysis. The first phase includes general professional and biographical information of the respondents while the second phase focuses on logistic regression analyses. The third phase focuses on the TFS data, specially comparing the sub-populations of leavers and stayers against their previous responses about induction participation, satisfaction at school, and would they do it again. To provide as much descriptive

information as possible, the specific questions in the SASS questionnaire that were used for data analysis can be found in Appendix A.



## **4.0 Results**

### *4.1 General Overview*

This study was designed to determine the relationship, if any, of participation in an induction program and the job satisfaction of early career teachers. These results will help school leaders better determine whether to dedicate funds to the creation, maintenance, and improvement of teacher induction programs. There were four phases of the data analysis. The first phase analyzed general data centering on teacher demographics. The second phase conducted and analyzed logistic regression analyses. The third phase conducted and analyzed linear regression analyses. The final phases included two-sample T-tests that incorporated data from the TFS.

### *4.2 General Data*

There were 43,244 respondents in the SASS 2003-2004 data set that was used. Of these total respondents, 5,435 teachers in their first, second and third year of teaching in public schools were identified. The data examined foundational teacher characteristics of the survey participants. Teacher characteristics were analyzed, including: number of years teaching, gender, age, race, degree awarded, grade level taught, salary, and participation in an induction program.

Table 4.1 identifies teachers within their first three years of full-time teaching. Most the respondents in this sample were in their first year of teaching. However, the number of teachers in their first through third year of teaching was similar, in the range of 30-39%.

**Table 4.1****Years Teacher in Public Schools**

Years (fulltime)	Freq.	Percent	Cum.
1	2097	38.59	38.59
2	1629	29.97	68.56
3	1709	31.44	100.00
Total	5435	100.00	

Table 4.2 illustrates the number of teachers who participated in an induction program. Of the 5,435 teachers identified as early career teachers, 3,531 of them (65%) participated in an induction program.

**Table 4.2****Number of Teachers Who Participated in an Induction Program**

Induction	Freq.	Percent	Cum.
1	3531	64.97	64.97
2	1904	35.03	100.00
Total	5435	100.00	

Table 4.3, below, shows that over 68% of respondents were female. Although the age range of respondents stretched from 22 to 73 years of age, most teachers were between 20 and 29 years of age.

**Table 4.3****Gender and Age**

Gender	Freq.	Percent	Cum.
Male	1752	32.24	32.24
Female	3683	67.76	100.00
Total	5435	100.00	

  

Age Ranges	Freq.	Percent	Cum.
20-29	2943	54.15	54.15
30-39	1353	24.89	79.04
40-49	743	13.67	92.71
50-59	359	6.61	98.77
≥60	37	0.68	100.00
Total	5435	100.00	

  

Age Values	Mean	Range	Mode
	47.50	51	26

Table 4.3 also identifies the respondents' age range, the mean of the age range, and the most frequently occurring age of the participants. A complete list of the frequency of the age range as well as the percentage of the age in the sample group can be found in Appendix B.

The SASS survey coded ethnicities into 29 categories. Most the respondents, 80% of the teachers, were identified as non-Hispanic white. Table 4.4 identifies the most frequently occurring ethnicities in the sample. A complete breakdown of ethnicities for the respondents can be found in Appendix C.

Table 4.4

**Race**

Race/Ethnicity	Freq.	Percent	Cum.
Non-Hispanic, White	4295	79.02	79.03
Non-Hispanic, Black	450	8.28	87.31
Hispanic, White	244	4.49	91.8
Hispanic, Black	15	0.28	92.08
Other	431	7.92	100.00
Total	5435	100.00	

**Table 4.5****Degree Earned**

Bachelor's Degree	Freq.	Percent	Cum.
Yes	5284	97.22	97.22
No	151	2.78	100.00
Total	5435	100.00	
Master's Degree	Freq.	Percent	Cum.
Valid Skip	151	2.78	2.78
Yes	1160	21.34	24.12
No	4124	75.88	100.00
Total	5435	100.00	

The degrees earned by the teachers were identified in the data set. Most of the teachers (97%) had earned a bachelor's degree at the time of the survey. Of the respondents, 21% of the teachers reported earning a master's degree. Table 4.5 identifies the degree earned.

Table 4.6 depicts the general grades levels that the respondents teach. Nearly 46% of the teachers reported teaching at the elementary level (grades 1-6) and 54% of teachers reported teaching at the secondary level (grades 7-12).

**Table 4.6**

**Grade Level Taught**

Grade Level Taught	Freq.	Percent	Cum.
1 (Elementary)	2499	45.98	45.98
2 (Secondary)	2936	54.02	100.00
Total	5435	100.00	

Table 4.7 depicts the base salary ranges of the respondents. The majority of teachers (71%) earn less than \$35,000 per year. The average salary is approximately \$32,000 per year. The most frequently occurring salary is \$30,000. Base salary does not include any supplemental earnings, such as coaching, sponsoring, or tutoring.

**Table 4.7****Base Salary**

Base Salary Ranges (\$)	Freq.	Percent	Cum.
15-19000	18	0.33	0.33
20-24000	305	5.61	5.94
25-29000	1740	32.01	37.95
30-34000	1818	33.45	71.40
35-39000	970	17.85	89.25
40-44000	392	7.21	96.46
45-49000	107	1.97	98.43
50-54000	42	0.77	99.2
55-59000	16	0.29	99.49
60-64000	15	0.28	99.77
≥65000	12	0.23	100.00
Total	5,435	100.00	
Age Values	Mean	Range	Mode
	\$31,973	\$74,876	\$30,000

#### *4.3 Analysis of Data: Demographic Characteristics of Teachers*

The number of years the participants taught in a public school was isolated in the SASS data to three years or less. The most frequently occurring year was the first year of teaching, with 2,097 teachers (38.6%). The second most frequently occurring year was the third year of teaching, with 1,709 teachers (31.4%). The third most frequently occurring year was the second year of teaching, with 1,629 teachers (30.0%).

Of the 5,435 respondents who participated in the SASS survey, the majority participated in an induction program. There were 3,531 teachers (65.0%), who participated in an induction program. However, a substantial third of the teachers participated in no induction program. Of the 3,531 that did participate in an induction program, 90.6% reported that they are generally satisfied at school and 91.4% reported that they would choose teaching again if given the opportunity to do it all over again. In contrast, of those that did not participate in an induction program, 87.8% reported that they are generally satisfied at school and 88.4% reported that they would choose teaching again if given the opportunity to do it all over again.

Of the 5,435 teachers studied in the data sample, 67.8% were female and 32.2% were male. Most the teachers, 2,943 (54.2%) ranged in age from 20 to 29 years old. Of the rest, 1,353 (24.9%) were 30 to 39 years old; 743 (13.7%) were between 40 and 49 years old; 359 (6.6%) were between 50 and 59 years old; and fewer than 1% (17 teachers) were over the age of 60. The most frequently occurring age groups included age 26 (585 teachers), followed closely by age 25 (580 teachers), and finally age 27 (556 teachers). The ages that occurred most infrequently were 68 and 72, with one teacher and two teachers respectively.



The SASS survey coded ethnicities into 29 categories. The most frequently occurring ethnic code was non-Hispanic, white. There were 4,295 (79.0%) in this group. The next most frequently occurring ethnic code was non-Hispanic, black. There were 450 (8.3%) in this group. Hispanic, white teachers numbered 244 (4.5%) and Hispanic, black teachers numbered 15 (0.3%). There were 431 (7.9%) of respondents in all other ethnic groups identified.

Of the 5,435 participants, 5,284 (97.2%) had earned a bachelor's degree. When asked if the participant had earned a master's degree, 1,160 (21.3%) answered yes and 4,124 (75.9%) answered no; 151 respondents skipped the question. 2,499 (46.0%) of the surveyed teachers reported that they taught at the elementary grade levels; 2,936 (54.0%) teachers reported that they taught at the secondary level. The average base salary was just under \$32,000 per year.

#### *4.4 Analysis of Data: Logistic Regression Analyses*

The second phase of data analysis in this study isolated the variable of participation in induction programs and correlation with job satisfaction. The analysis performed always included the identified independent variable of participation in an induction program. The dependent variables selected included teacher satisfaction teaching at school and would the teacher go into the profession again if given the opportunity to do it all over again. The purpose of this study was to examine the relationship between participation in an induction program and satisfaction at school, as well as whether the teacher would choose education again if given the option to do so.

All data analyses examined in this study were run by a statistical program called Stata. Stata produced output data by odds ratio, standard deviation and significance level. The purpose of this study was to examine the relationship between the independent variable of

induction program (and others) and the dependent variables of satisfaction and would teach again. The logistic regression analyses were performed to predict the relationship between the independent and dependent variables. The relationship was predicted based upon the odds ratio calculation which aids in the determination of the likelihood of an occurrence based upon variables. An alpha level of .05 was used as the basis of determining statistical significance of the results, denoted  $P > |z|$  in the tables.

Table 4.8 shows the relationship between teacher satisfaction and induction program participation; Table 4.9 show the relationship likelihood of choosing teaching as a career again and induction program participation. The other teacher variables were also included in both analyses. All results that show statistical significance are reported at the .05 or .01 level of significance. Data which demonstrated a statistical significance ( $p < .05$ ) are coded with an asterisk (\*). Similarly, data which demonstrated a statistical significance of an alpha level less than .01 ( $p < .01$ ), were coded by double asterisks (\*\*).

To fully understand the relationship between teacher induction and the satisfaction variables, a logistic regression analysis was conducted using induction participation as the only variable. A second test was run, this time adding the variable of gender to the test. The next test included age. This process was followed, adding one independent variable at a time, until thirteen distinct variables were included in the logistic regression analyses. Tables 4.8 and 4.9 show the first and the last iterations of both logistic regression analyses. The complete logistic regression tables analysis of ethnicities for the respondents can be found in Appendices D and E.

Table 4.8 reveals that induction participation remains a statistically significant variable in each iteration of the logistic regression analysis; the data reveals a statistically significant relationship between teacher satisfaction and participation in an induction program. There is also statistical significance found in whether the respondent has a master's degree. Table 4.9 also reveals a statistically significant relationship between the likelihood of choosing teaching again and teacher induction. There was also statistical significance found in age, the grade level taught, and whether the parents are supportive.

Table 4.8

## Logistic Regression Analysis of Satisfaction at School and Induction Program Participation

Table A		Odds Ratio	Std. Err.	z	P> z
1	Induction	1.416751	.1269185	3.89	**

*The complete table can be found in Appendix D.*

Table M					
1	Induction	1.430959	.1293392	3.96	**
2	Gender	1.0399	.102525	0.40	
3	Age	.9988282	.0047174	-0.25	
4	BA	.877847	.2560594	-0.45	
5	MA	.7688903	.0805907	-2.51	*
6	Grade	1.043356	.0962114	0.46	
7	Salary	.9999985	7.09e-06	-0.21	
8	Policy Influence	.9819784	.0741335	-0.24	
9	Classroom Control	.9147874	.0830503	-0.98	
10	Supportive Admin	1.170958	.1969066	0.94	
11	Supportive Parents	.8714981	.0824345	-1.45	
12	Recognition	.8508681	.1036567	-1.33	
13	Poverty	1.042727	.0964162	0.45	

\*p < .05    \*\*p < .01

Table 4.9

**Logistic Regression Analysis of Would Do Again and Induction Program Participation**

Table A		Odds Ratio	Std. Err.	z	P> z
1	Induction	1.393906	.1301525	3.56	**

*The complete table can be found in Appendix E.*

Table M					
1	Induction	1.421152	.1346825	3.71	**
2	Gender	.8625339	.085658	-1.49	
3	Age	1.017312	.0046485	3.76	**
4	BA	.7608769	.2166174	-0.96	
5	MA	.8066154	.0875222	-1.98	*
6	Grade	1.520739	.1515928	4.21	**
7	Salary	.9999892	7.75e-06	-1.40	
8	Policy Influence	1.100918	.0876813	1.21	
9	Classroom Control	1.076227	.1051536	0.75	
10	Supportive Admin	.9754077	.1782642	-0.14	
11	Supportive Parents	.7983677	.0799766	-2.25	*
12	Recognition	1.141433	.1414782	1.07	
13	Poverty	.996867	.0961817	-0.03	

\*p < .05    \*\*p < .01

#### *4.5 Analysis of Data: Linear Regression Analyses*

To simplify the findings of this research, a decision was made to consolidate the SASS survey questions 63 and 67 into dichotomous variables. The reasoning behind this decision is because the study centered on the relationship between induction program participation and satisfaction of any kind. Question 63 asks:

To what extent do you agree or disagree with each of the following statements?

u. I am generally satisfied with being a teacher at this school (T0350)

And offers the following responses:

- 1) Strongly agree
- 2) Somewhat agree
- 3) Somewhat disagree
- 4) Strongly disagree

Since answers 1 and 2 both suggest satisfaction and answers 3 and 4 both suggest dissatisfaction, the answers were consolidated into satisfied and not satisfied. The same approach was taken with question 67, which asks:

If you could go back to your college days and start over again, would you become a teacher or not? (T0382)

And offers the following responses:

- 1) Certainly would become a teacher
- 2) Probably would become a teacher
- 3) Probably would not become a teacher

- 4) Certainly would not become a teacher

Answers 1 and 2 suggest that the respondent would choose teaching again and answers 3 and 4 suggest that the respondent would not choose teaching again. These answers were compiled into a dichotomous variable indicating yes or no to the question.

To conduct a thorough study, linear regression analyses were performed to predict the relationship between the independent and dependent variables. The relationship was predicted based upon the coefficient calculation which aids in the determination of the likelihood of an occurrence based upon variables. An alpha level of .05 was used as the basis of determining statistical significance of the results, denoted  $P > |t|$  in the tables.

Table 4.10 shows the relationship between teacher satisfaction and induction program participation; Table 4.11 show the relationship likelihood of choosing teaching as a career again and induction program participation. The other teacher variables were also included in both analyses. To better understand the relationship of teacher induction and the satisfaction variables, a linear regression analysis was conducted using induction participation as the only variable. A second test than added the other tested variables.

Table 4.10 indicates that there is a statistically significant relationship between participation in an induction program and satisfaction at school. There are also several other variables that are statistically significant. These variables include gender, age, master's degree, and salary. Table 4.11 indicates that there is a statistically significant relationship between participation in an induction program and the likelihood of choosing teaching again. There are

also several other variables that are statistically significant. These variables include age, master's degree, and supportive parents.

**Table 4.10**

**Linear Regression Analysis of Satisfaction at School and Induction Program Participation**

Table A		Coef.	Std. Err.	t	P> t
1	Induction	.096445	.0213941	4.51	**

Table B					
1	Induction	.0547313	.0183353	2.99	**
2	Gender	.0980613	.0193129	5.08	**
3	Age	.0402163	.0009292	43.28	**
4	BA	.0270071	.0542851	0.50	
5	MA	-.0573753	.021739	-2.64	**
6	Grade	.0117115	.0181346	0.65	
7	Salary	.0000102	1.39e-06	7.36	**
8	Policy Influence	-.0059426	.0148987	-0.40	
9	Classroom Control	-.0223672	.0181204	-1.23	
10	Supportive Admin	-.0061131	.034099	-0.18	
11	Supportive Parents	-.0196819	.0184773	-1.07	
12	Recognition	-.0116809	.0232617	-0.50	
13	Poverty	.010659	.0181716	0.59	

\*p < .05    \*\*p < .01



**Table 4.11****Linear Regression Analysis of Would Do Again and Induction Program Participation**

Table A		Coef.	Std. Err.	t	P> t
1	Induction	.3042025	.0303622	10.02	**

Table B					
1	Induction	.2829221	.0296766	9.53	**
2	Gender	-.0394091	.031259	-1.26	
3	Age	.0251568	.001504	16.73	**
4	BA	-.0490557	.0878632	-0.56	
5	MA	-.0995674	.0351857	-2.83	**
6	Grade	.0557084	.0293518	1.90	
7	Salary	4.13e-06	2.25e-06	1.84	
8	Policy Influence	.0277331	.0241143	1.15	
9	Classroom Control	.0113182	.0293288	0.39	
10	Supportive Admin	.0023739	.0551909	0.04	
11	Supportive Parents	-.0472938	.0299064	-1.58	*
12	Recognition	.0625017	.0376503	1.66	
13	Poverty	-.0215442	.0294117	-0.73	

\*p < .05    \*\*p < .01

#### *4.6 Analysis of Data: Independent Samples T-tests*

Using data from the TFS, this study could identify 199 leavers and 808 stayers from the original sample of the 5,435 teachers early career teachers. The means of those sub-populations were run against the variables of teacher induction, satisfaction at school, and would do again in a series of two-sample T-tests. Although the focus of this study is the relationship between teacher induction and the general satisfaction of early career teachers, the literature connecting job satisfaction to employee retention cannot be ignored. Therefore, the TFS supplied data by which retention can be compared to induction participation and the satisfaction variables.

The two-sampled T-tests showed positive correlations between retention and induction, satisfaction, and would do again. 65% of stayers reported participation in induction programs. 93% of stayers reported the previous year that they were satisfied at school; less than 21% of leavers reported that they were satisfied. Almost 90% of stayers reported the previous year that they would choose teaching again; interestingly, 73% of leavers are reported that they would choose teaching again.

Table 4.12

Two-sample T-test of Induction, by (Stayers/Leavers)

Group	Obs	Mean	Std. Err.	Std. Dev.
Stayers (0)	808	.6435644	.0168597	.4792427
Leavers (1)	198	.5757576	.0352122	.4954803
Combined	1006	.6302187	.0152277	.4829855
Difference		.0678068	.0382589	
Difference = mean (Stayers) – Mean (Leavers)			t = 1.7723	

Ho: diff = 0

degrees of freedom = 1004

Ha: diff &lt; 0

Ha: diff != 0

Ha: diff &gt; 0

Pr(T &lt; t) = 0.9617

Pr(|T| &gt; |t|) = 0.0766

Pr(T &gt; t) = 0.0383

Although Table 4.12 has a low t-value of 1.8, the t-test still reveals a positive correlation between participation in an induction program and the those that chose to stay in the teaching profession. However, Table 4.13 has a large t-value of 30.6 and shows a significant correlation between satisfaction and those teachers that decided to stay in the profession. The relationship that this t-test suggests about the satisfaction reinforces the studies cited in the literature review and affirms the positive relationship between teacher satisfaction and teacher retention.

Table 4.13

Two-sample T-test of Satisfaction at School, by (Stayers/Leavers)

Group	Obs	Mean	Std. Err.	Std. Dev.
Stayers (0)	808	.9257426	.0092295	.2623518
Leavers (1)	198	.2070707	.0288698	.4062338
Combined	1006	.7842942	.0129744	.4115156
Difference		.7186719	.0234839	
Difference = mean (Stayers) – Mean (Leavers)			t = 30.6028	

Ho: diff = 0

degrees of freedom = 1004

Ha: diff &lt; 0

Ha: diff != 0

Ha: diff &gt; 0

Pr(T &lt; t) = 1.0000

Pr(|T| &gt; |t|) = 0.0000

Pr(T &gt; t) = 0.0000

Although not as large as the previous t-value, Table 4.14 has a large t-value of 6.2 and shows a positive correlation between the likelihood of those teachers that stayed in the profession to choose teaching if they had the opportunity to choose all over again. The logistic regression analyses and the linear regressions analyses indicate a statistically significant relationship between participation in a teacher induction program and satisfaction. In turn, the two-sampled t-tests reveal a positive relationship between satisfaction and teachers that chose to remain in the profession. This suggests the link between teacher induction and teacher satisfaction, and teacher satisfaction and teacher retention.

**Table 4.14****Two-sample T-test of Would Do Again, by (Stayers/Leavers)**

Group	Obs	Mean	Std. Err.	Std. Dev.
Stayers (0)	808	.8972772	.0106871	.3037845
Leavers (1)	198	.7323232	.0315445	.4438704
Combined	1006	.8648111	.0107857	.3420953
Difference		.164954	.0266369	
Difference = mean (Stayers) – Mean (Leavers)			t = 6.1927	

Ho: diff = 0

degrees of freedom = 1004

Ha: diff &lt; 0

Ha: diff != 0

Ha: diff &gt; 0

Pr(T &lt; t) = 1.0000

Pr(|T| &gt; |t|) = 0.0000

Pr(T &gt; t) = 0.0000

**4.7 Discussion of Findings**

The logistic regression analysis in Table 4.8 shows the relationship between the dependent variable of satisfaction at school and the independent variables identified. Other teacher and school variables were included in the analysis. All results that demonstrated a statistically significant relationship at the .05 or .01 level were reported.

The analysis reveals a statistically significant relationship between the dependent variable of satisfaction with induction program participation. The first logistic regression

analysis reveals that the teachers who participated in an induction program noted they were 42% more likely to be satisfied than those who did not participate in an induction program. After layering in other independent variables through subsequent logistic regression analyses, that number increases to 43%.

Another statistically significant relationship, albeit a negative relationship, is if the respondent had a master's degree. Those with master's degrees were 23% less likely to be satisfied as those without master's degrees. There was no statistical significance with the remaining independent variables.

The logistic regression analyses in Table 4.9 shows the relationship between the dependent variable of would do again and the independent variables identified. Other teacher and school variables were included in the analysis. All results that demonstrated a statistically significant relationship at the .05 or .01 level were reported.

The analysis revealed a statistically significant relationship between the dependent variable of would teach again and the independent variable of induction program participation. The first logistic regression analysis reveals that the teachers who participated in an induction program noted they were 39% more likely to choose teaching if had to do it again than those who did not participate in an induction program. After layering in other independent variables through subsequent logistic regression analyses, the odds ratio indicates that those teachers were 42% more likely to choose teaching again.

In Table 4.9, there were other variables identified that possessed a statistical significance with the dependent variable of would teach again. As teachers increases one ten-

year increment in age, they were 1.7% more likely to choose teaching again. Those teaching at the secondary level were 32% more likely to choose teaching again than those teaching at the elementary level. Interestingly, those that reported having students with supportive parents were 20% less likely to choose teaching again.

The linear regression analysis in Table 4.10 shows statistically significant relationship between induction program participation and the dependent variable of satisfaction at school. When run by itself, induction participation has a coefficient value of 0.096445. When measured absent of other independent variables, there is an 9.6% increase in satisfaction at school if teachers participate in induction. However, once the remaining independent variables are included in the analysis, induction results in a coefficient of 0.547313, or a 5.5% increase in satisfaction at school.

The linear regression analysis in Table 4.11 shows statistically significant relationship between induction program participation and the dependent variable of would teach again. When run by itself, induction participation has a coefficient value of 0.3042024. When measured absent of other independent variables, there is an 30.4% increase in would teach again if teachers participate in induction. However, once the remaining independent variables are included in the analysis, induction results in a coefficient of 0.2829221, or a 28.3% increase in would do again.

The two-sampled T-tests showed positive correlations between retention and induction, satisfaction, and would do again. Table 4.12 compares the means of both groups (the stayers and leavers) by induction. Approximately 64% of the stayers participated in an induction

program, whereas 58% of leavers participated in an induction program. The corresponding two-tailed value is 0.0766, which is not less than our alpha level of 0.05. It cannot be concluded that there is a difference in means in induction participation between stayers and leavers. However, the one-tailed p-value for the alternative hypothesis of  $\Pr(T > t) = 0.0383$  is less than our alpha level, indicating that the mean is statistically significantly greater than zero.

Table 4.13 compares the means of both sub-populations by Satisfaction at School. Almost 93% of the stayers identified as being satisfied at school in the 2003-2004 SASS. In contrast, only 21% of the leavers identified as being satisfied in school. The corresponding two-tailed value is 0.0000, concluding that there is a statistically significant difference in means in satisfaction at school participation between stayers and leavers. The one-tailed p-value for the alternative hypothesis of  $\Pr(T > t) = 0.0000$  is less than our alpha level, indicating that the mean is statistically significantly greater than zero. This shows a statistically significance between satisfaction at school and staying in the profession.

Table 4.14 compares the means of stayers and leavers by Would Do Again. 90% of the stayers reported that they would choose teaching as a profession is they had it do again. Interestingly, 73% of the leavers also said that they would choose teaching as a profession is they had to do it again. The corresponding two-tailed value is 0.0000, concluding that there is a statistically significant difference in means in satisfaction at school participation between stayers and leavers. The one-tailed p-value for the alternative hypothesis of  $\Pr(T > t) = 0.0000$  is less than our alpha level, indicating that the mean is statistically significantly greater than zero. This shows a statistically significance between would do again and staying in the profession.



#### *4.8 Summary*

The data supports that there is a positive correlation between participation in an induction program and the satisfaction at school of early career teachers. There is also a positive correlation between participation in an induction program and whether teachers would re-enter the profession if given the opportunity to start over. There were also other variables that showed statistical significance: age, master's degree, and grade level taught.

## 5.0 Discussion

This research was conducted to determine if there was a positive relationship between participation in an induction program and the job satisfaction of early career teachers.

Research reveals a connection between job satisfaction and retention. During this time of budget constraints, such research could help guide districts in their addressing of job retention and funding allocations. By learning whether induction programs are effective at stemming the attrition rate of early career teachers, school leaders can be better informed about whether to allocate funds to provide these. The budget crisis in the state of Kansas has negatively impacted state and local budgets in many sectors, but especially in education. Because of pending economic difficulties, a focus upon personnel retention and resource allocation is more important than ever.

This study examined one question: Is there a positive correlation between participation in a teacher induction program and job satisfaction? If participation in induction programs can stem the attrition rate of early career teachers and can help increase understanding of teacher turnover and help improve funding decisions to yield the highest rate of return for investment, then school leaders need to have a better understanding of how to keep quality teachers in the classroom.

Early career teachers (defined as teachers in years 1 through 3) were identified using the 2003-2004 Schools and Staffing Survey from the National Center for Education Statistics. A sample of 5,435 early career teachers was identified. Teacher demographics and school characteristics were identified in Chapter 3. Logistic regression analyses identified the relationships between job satisfaction, the intention to re-enter the teaching profession and

induction participation. This chapter identifies key findings from the data analysis, implications, and conclusions.

The second phase of data analysis isolated the variables of participation in induction programs and its correlation with job satisfaction. An examination of the data utilized the independent variables, which included participation in an induction program and the dependent variables, which included teacher satisfaction teaching at school and would the teacher re-enter the teaching profession again if he or she could do it over. Because the purpose of this study was to examine the relationship between participation in an induction program and satisfaction at school, as well as the teacher's career choice if given the opportunity to re-enter the profession, the data analysis in this phase was critical in determining if a positive relationship existed.

The third phase of data analysis used information provided by the 2004-2005 Teacher Follow-up Survey from the National Center for Education Statistics. This analysis involved two-sample T-tests to compare the means of sub-populations of stayers and leavers using the variables of induction, satisfaction at school, and whether the teacher would re-enter the profession. The t-tests revealed positive correlations with stayers among all three variables. It is also important to note that a relatively small percentage of leavers reported the previous year that they were satisfied at school. Although not the focus of this study, the T-tests support the literature as they hint towards a correlation between job satisfaction and employee retention.

The logistic regression analyses and the linear regressions analyses indicate a statistically significant relationship between participation in a teacher induction program and

satisfaction. In turn, the two-sampled t-tests reveal a positive relationship between satisfaction and teachers that chose to remain in the profession. This suggests the link between teacher induction and teacher satisfaction, and teacher satisfaction and teacher retention.

Although there is a correlation between participation in teaching induction programs and the general job satisfaction of early career teachers, it is much less clear whether this participation leads to greater job satisfaction. In statistics, it is often repeated that correlation does not imply causation. However, the research shows that teachers that do participate in induction programs are also more likely to report that they are both generally satisfied with their jobs; since this contrasts with their peers that did not participate in teacher induction programs, the research does hint that the relationship might in fact be causal.

However, it is also likely that the types of school districts that provide teacher induction programs share other characteristics that attract teachers predisposed to stay in education. Research conducted by the Research and Evaluation Office at the Office of Superintendent of Public Instruction in the state of Washington collected and analyzed more than eighty research reports and articles that shed light on the major themes that are shared by strong school districts. Their analysis “identified 13 common themes, which have been clustered into broad categories” that include effective leadership, quality teaching and learning, and a professional culture (Shannon & Bylsma, 2004).

The first of these themes centered on the concept of effective leadership. In schools that this report would define as *good*, “leadership is committed, persistent, proactive, and distributed through the system.” Dynamic and shared leadership is at the center of this category and can be described as “dynamic, united in purpose, visible in schools, and interested

in instruction” (Shannon & Bylsma, 2004). In recent years, research has emphasized the importance of school leadership in improving outcomes for schools. However, this is not the charismatic leader whose skill-set is impossible to replicate of the leader as drill sergeant; instead, it is a school leader who can transform a school environment so that its students and teachers can flourish. A 2010 study by MetLife found that more than half of a school’s impact on student gains can be attributed to both principal and teacher effectiveness – with principals accounting for 25% and teachers 33% of the effect. “While each teacher may have greater impact on his or her own students, the principal affects the entire school culture in addition to the performance of each and every teacher and student in the school” (Achieve, 2013).

Additionally, teachers that report that they are included in school decision-making and collaborate often with other teachers are more likely to report that teaching is a valued profession in society. In turn, these same teachers report higher levels of job satisfaction and confidence in their ability to teach and to motivate students, according to a 2013 survey of middle-school teachers in thirty-four countries and regions around the world conducted by the Organization for Economic Co-operation and Development” (Barshay, 2014). Simply put, teachers that get to participate in the decision-making process have a higher feeling of value, increasing their general job satisfaction (Kim & Loadman, 1994).

Good school districts can also be defined by their focus on quality teaching and learning. This focus requires high expectations and accountability for all adults, “beginning with the superintendent, senior staff, and principals” (Shannon & Bylsma, 2004). Building leadership expects excellence, monitors performance, and provides meaningful feedback. These high expectations “influence hiring decisions and prompt districts and schools to address issues

regarding ineffective teachers” (Shannon & Bylsma, 2004). These districts provide high quality professional development programs that are “intensive, ongoing, focused on classroom practice, and include on-site coaching” (Shannon & Bylsma, 2004). They also pay close attention to classroom practice and provide guidance and oversight for improving teaching and learning.

Good districts build a culture of commitment, collegiality, mutual respect, and stability. They “develop and nurture a professional culture and collaborative relationships” that reflect the needs and strengths of the district, schools, and community stakeholders (Shannon & Bylsma, 2004). Just as the culture of the classroom is the sum of the teachers’ attitudes and expectations, so too, the school culture is a result of the staff’s collective thoughts, beliefs, expectations, and conversations that lead directly to both individual and group behaviors. These districts build a culture of commitment, collegiality, mutual respect, and stability. Professional norms include peer support, collaboration, trust, shared responsibility, and continuous learning for the adults in the system.

An important part of the school culture is the recognition of a job well-done. According to a study by Eric Anderman, the strongest path to teacher satisfaction is a school culture that stresses recognition. “Thus, the more a teacher perceives an emphasis on recognition, the more satisfied that teacher is with his or her work” (Anderman, 1991). The study suggests that school culture is strongly related to teacher satisfaction and commitment and that environments that stress affiliation, accomplishment, and recognition may be most conducive to satisfaction and commitment.

What many would define as good school districts share traits that center on three board categories. The categories are effective and distributive leadership, expectations of quality teaching and learning, and a professional and collaborative culture that emphasizes recognition of successes. However, what is not clear is the selection bias that might occur as teachers that are likely more committed to the profession seek out districts with the resources and commitments to provide them with an environment that is conducive to their general job satisfaction.

Since districts that exhibit these traits provide meaningful professional development and support to teachers, then it comes to no surprise that they also offer beginning teacher induction programs that provide support and mentoring to early career teachers. A possible extension of this research is to study whether participation in an induction program correlates with teacher job satisfaction, or do teachers that are more satisfied with the choice of profession seek out supportive school districts. Regardless as to whether the induction program itself leads to job satisfaction, or whether induction programs are a characteristic of the supportive school districts that attract teachers most committed to the profession, there is a statistically significant correlation between induction programs and job satisfaction.

### *5.1 Overview*

The study revealed a statistically significant relationship between teacher satisfaction and participation in an induction program. Statistical significance was determined if p value was less than .05 ( $p < .05$ ) or if p value was less than .01 ( $p < .01$ ). To further understand the connections between the dependent variables and teacher and school demographics, the data were examined to determine a relationship between specific variables. Statistical significance

was found in relation to satisfaction at school and participation in an induction program with the following teacher variables: gender, age, BS/BA awarded, MA/MS awarded, grade level taught, salary, supportive administration, influence over school policy, classroom control, the problem of poverty at the school, supportive parents, positive and recognition for a job well-done.

The research question focused upon examining job satisfaction of teachers. Because of the need to examine this element, a question from the SASS survey was included. The sample of teachers was asked if they would re-enter the profession again. The data showed that there is statistical relation between those who participated in an induction program and whether they would re-enter the profession. To understand the teacher background as well as school demographics in relation to the dependent variable, other data variables were explored. The data revealed that there was statistical significance between those who participated in a teacher induction program and variables including age, degree earned, and grade level taught.

When examining the relationship between job satisfaction and the participation in an induction program, the study's sample population revealed a statistically significant relationship between the two. Because research supports the link between job satisfaction and retention, it can be concluded that schools that invest in teacher induction programs will more likely have satisfied early career teachers than schools that do not invest in teacher induction programs. Based on this study, schools should invest time and expenditures in working with new teachers through induction programs.



## *5.2 Study Implications*

There is a clear indication that America's teacher attrition problem is "spiraling out of control" (National Commission on Teaching and America's Future, 2007). Teachers new to the profession are far more likely to leave than their more experienced counterparts. Several research studies conducted over the past two decades have found that between forty and fifty percent of new teachers leave the profession within their first five years of teaching (Grissmer & Kirby, 1987, 1992, 1997; Hafner & Owings, 1991; Huling-Austin, 1990; Ingersoll & Smith, 2003; Murnane et al., 1991; Veenman, 1985).

Each fall students return to schools to find that far too many of their teachers have not returned to the classroom with them. Teacher attrition has a huge impact on urban schools and minority students; the rate of attrition is roughly fifty percent higher in poor schools than in more affluent schools. "Low performing schools rarely close the student achievement gap in large part because they never close the teaching quality gap—they are constantly rebuilding their staffs" (Barnes et al., 2007).

Student achievement suffers, but high turnover schools are also extremely costly to operate. Bluntly put, teacher turnover costs money. A research study examining the costs to the state of Texas to replace teachers cited "excessive teacher turnover as a cost to public education beyond the expense of operating schools and is a wasted expense that does not contribute to the education of...children" (Texas Center of Educational Research 2000). The actual costs of replacing teachers are not always blatantly apparent and cannot be found as single line item of a school district's budget. The costs are embedded in many areas, including recruitment, separation processing, training, and orientation of new teachers. NCTAF (2007)

estimated that the cost of recruiting, hiring, and training a new teacher is approximately 30% of the teacher's salary, and is a cost that is not recoverable. The cost of high rates of teacher attrition and migration for school districts across the United States has been conservatively estimated to be \$2.2 billion annually. Many analysts consider this financial burden to be much larger, particularly when losses in teacher quality and student achievement are considered (Alliance for Excellent Education, 2004).

Trapped in a chronic cycle of teacher hiring and replacement, districts are drained of precious dollars that could be better spent to improve teaching quality and student achievement. A conservative national estimate of the cost of replacing teachers who have dropped out of the profession is \$2.2 billion per year. If the cost of replacing teachers who have migrated to other schools is included the total jumps to a staggering \$4.9 billion each year (Alliance for Excellent Education 2004). However, if the costs associated with lost productivity and human capital are included, the cumulative costs may reach an incredible \$7.34 billion each year (Milanowski & Odden, 2007).

As large as these dollar amounts may be, they do not include any calculation of the price that students pay when qualified teachers leave nor the negative effect on academic achievement. Teacher quality is crucial to student achievement (Ferguson & Ladd, 1996; Haycock, 1998; Rice, 2003). This is especially true for those students who need good teachers the most. Researchers have found that the impact of a higher-quality teacher is particularly significant for low-performing minority students, and may compensate for racial and socioeconomic disadvantages (Clotfelter, Ladd, & Vigdor, 2007). It is clear that recruiting and

developing high-quality teachers—and then retaining them in every community and at every grade level—is critical to providing an equitable education to children.

Darling-Hammond (2003) reported that inadequate teacher preparation is a factor that contributes to beginning teacher attrition, and analyzed several studies which suggested that those teachers who were inadequately prepared to teach were more likely to leave the profession, and the more training prospective teachers received, the more likely they are to stay. Ingersoll (2003) stated that ideally, all teachers enter the classroom fully trained and prepared to teach; however, many begin their teaching careers with widely different levels of preparation and experience, and that this is particularly true in schools that serve the neediest students from lower socioeconomic backgrounds, minorities, or have lower performances. A NCES study in 2007 found that 29% of beginning teachers who had not experienced student teaching left the profession within the first 5 years compared with 15% that left who had completed student teaching. The same study found that 49% of uncertified entrants left within 5 years, compared with 14% of certified entrants.

The research reveals three primary implications for the professional development of new teachers: funding, new teacher support, and program evaluations. Because of the positive relationship between satisfaction and participation in an induction program, it is important that schools should provide adequate funding to teacher induction programs to retain high-quality teachers early in their careers. Information provided in the literature review of this study revealed the connection between job satisfaction and employee retention, as well as the high cost of teacher turnover. The initial investment in induction programs might be costly, but

overtime might prove to be the cheaper alternative when dealing high rates of teacher attrition.

Feiman-Nemser (2003) reported that three or four years are required to reach competency in the teaching profession, and several more to reach proficiency. When beginning teachers leave the profession before they have gained this experience, any investment in their professional development has been lost. A strong core of experienced teachers who can positively impact student achievement does not have the chance to develop. High turnover rates also create an atmosphere of disjointedness, a lack of community, and reduced collaboration among the faculty.

The literature review provided information about how induction programs might vary from district to district, therefore it is important that school leaders determine the type of support that is most effective for early career teachers. Inman and Marlow (2004) revealed that teachers who stay in the profession “exist in a supportive professional environment” that some new teachers may not have the opportunity to experience. Woods and Weasmer (2002) noted that new teachers must be in a supportive environment to grow and learn from veteran colleagues. Dopp’s (2006) questionnaire revealed six elements that new teachers who participated in an induction program wanted in terms of support: (a) support for “emotional and social needs;” (b) a need for a mentor and peer collaboration; (c) support with student discipline and classroom management; (d) school district culture; (e) management of time; and (f) actively involved administration.

Schlechty and Whitford (1989) indicated a need for a site-based professional structure to support beginning teachers since “programs cannot be successful unless the capacity of

school systems for human resource development is greatly enhanced.” Fitzpatrick et al. (2006) focused on this issue and offered ways to create effective induction programs. The study revealed that new teachers have stronger job satisfaction and higher retention rates if properly matched with a mentor and provided a solid induction program.

### *5.3 Limitations*

Most studies come with limitations; this study is no different. Conducting research on a large scale often poses challenges. While many studies have been conducted using the large data source found in the SASS surveys, there are also limitations to the use of the data and the organization of the studies. At times, the questionnaires provided can be limiting. Follow-up questions that may be able to identify other factors may not be included. This research was dependent upon existing questions asked of the respondents; other questions about job satisfaction and intent to stay on the job the following year, as well as willingness to re-enter the profession, would have been posed more specifically if given the opportunity to interact directly with respondents.

A 2004 study revealed that per the 2000-2001 follow-up survey, 27% of teachers that left the profession had reported that they had no intention to leave the profession on the 1999-2000 SASS survey (Luekens, 2004). According to a NCES study (2000) which tracked 1992-1993 college graduates’ teaching careers through 1997, 25% of teachers left the profession within their first 5 years to pursue another profession; 24% left because of dissatisfaction with teaching; 10% left due to dissatisfaction with salaries and benefits; and 8% left because of personal or family reasons. Ingersoll (2001) stated that analysis of national data suggests that

inadequate administrative support, low salaries, student discipline problems, and limited input into decision-making contribute to higher attrition rates as well.

Another limitation is the assumed link between job satisfaction and intent to stay on the job. Although research exists that links the two, the questions taken from the SASS surveys assume that the relationship between job satisfaction and intent to stay on the job is causal. A more accurate conclusion might be drawn if more specific questions could be posed to the respondents regarding job satisfaction and intent to stay on the job.

Finally, it must be considered that perhaps the attrition rate of teachers is not necessarily higher than that of other professions. A study published in 2007 compared teachers and three other professions—accountants, nurses, and social workers. Although the study revealed that 8% of teachers left the profession, as did 8% of accountants, 6% of nurses, and 15% of social workers (Harris & Adams, 2007). A 2014 study revealed that of the college graduates who became teachers, 30% left within six years. The study also points out that “teachers leave the profession at about the same rate as police officers, while having double the attrition rates of engineers and pharmacists. On the other hand, teachers had significantly less turnover than secretaries, child care workers, and paralegals” (Kan, 2014). In fact, in contradiction to Ingersoll’s research, a study released in 2015 suggests that the teacher attrition rate is much lower than otherwise reported. The study found that 10 percent of new teachers in 2007-08 didn’t return the following year, increasing cumulatively to 12 percent in year three, 15 percent in year four and 17 percent in the fifth year. The totals include teachers who were let go and subsequently didn’t find a job teaching in another district (Gray & Taie, 2015).

#### *5.4 Conclusions*

The purpose of this study was to examine the relationship between induction program participation with general job satisfaction. The literature review indicates the connection between job satisfaction and employee retention. The connection can be made that the more satisfied a teacher is on the job, the more likely the teacher will remain on the job.

Understanding the connection between job satisfaction and the potential retention of early career teachers, such research could help guide districts in their addressing of job retention and funding allocations during this time of budget constraints.

Approximately one third of beginning teachers in public schools leave the profession within the first three years, and almost half leave after five years (Darling-Hammond, 2003; Halford, 1998; Ingersoll, 2001; Ingersoll & Smith, 2003). Schools of education are producing highly qualified teachers; however, they are staying in the profession for a short time. Merrow (1999) stated, “The teaching pool keeps losing water because no one is paying attention to the leak. That is, we’re misdiagnosing the problem as ‘recruitment’ when it’s really retention.”

## **Appendices and References**



## Appendix A

### *SASS Questionnaire*

The following questions are taken from the 2003-2004 SASS survey taken by first, second, and third year teachers in public schools (NCES, 2007). The questions asked of the respondents were measured by interval and categorical responses. The response options are noted under each question.

34. In your FIRST year of teaching, did you participate in a teacher induction program? (T0216)

(Respondents to this question were asked to answer yes or no.)

61. How much actual influence do you think teachers have over school policy AT THIS SCHOOL in each of the following areas?

- a. Setting performance standards for students at this school (T0311)
- b. Establishing curriculum (T0312)
- c. Determining the content of in-service professional development programs (T0313)
- d. Evaluating teachers (T0314)
- e. Hiring new full-time teachers (T0315)
- f. Setting discipline policy (T0316)
- g. Deciding how the school budget will be spent (T0317)

For the purposes of this study, influence over school policy was determined by an aggregate score of the subcategories, based on the following categorical responses:

No influence

Minor influence

Moderate influence

A great deal of influence

62. How much actual control do you have IN YOUR CLASSROOM at this school over the following areas of your planning and teaching?

- a. Selecting textbooks and other instructional materials (T0318)
- b. Selecting content, topics, and skills to be taught (T0319)
- c. Selecting teaching techniques (T0320)
- d. Evaluating and grading students (T0321)
- e. Disciplining students (T0322)
- f. Determining the amount of homework to be assigned (T0323)

For the purposes of this study, classroom control was determined by an aggregate score of the subcategories, based on the following categorical responses:

No control

Minor control

Moderate control

A great deal of control

63. To what extent do you agree or disagree with each of the following statements?

- b. The school administration's behavior toward the staff is supportive and encouraging (T0331)
- e. I receive a great deal of support from parents for the work I do (T0334)
- m. In this school, staff members are recognized for a job well done (T0342)
- u. I am generally satisfied with being a teacher at this school (T0350)

There were twenty-one possible statements in question 63 of the teacher questionnaire. However, the statements applicable to the study are designated by the letters b, e, m, and u. The respondents were asked to agree or disagree with each of the statements based on the following categorical responses:

Strongly agree

Somewhat agree

Somewhat disagree

Strongly disagree

67 a. If you could go back to your college days and start over again, would you become a teacher or not? (T0382)

There were two parts to question 67 in the teacher questionnaire. The first statement was applicable to the research study and the respondents could choose from the following answer choices:

Certainly would become a teacher

Probably would become a teacher

Probably would not become a teacher

Certainly would not become a teacher

The data collected by the SASS survey of 2003-2004 relating to the above questions were utilized to tabulate all basic or cross-statistical tabulations as well as logistical regression tabulations.

## Appendix B

### *Weighted Responses by Age*

Teacher's Age	Freq.	Percent	Cum.
21	9	0.16	0.16
22	169	2.91	3.07
23	491	8.46	11.53
24	670	11.55	23.08
25	634	10.93	34.01
26	567	9.77	43.78
27	379	6.53	50.31
28	276	4.76	55.07
29	213	3.67	58.74
30	204	3.52	62.25
31	154	2.65	64.91
32	130	2.24	67.15
33	166	2.86	70.01
34	125	2.15	72.16
35	106	1.83	73.99
36	87	1.5	75.49
37	99	1.71	77.2
38	102	1.76	78.96

Teacher's Age	Freq.	Percent	Cum.
39	81	1.4	80.35
40	94	1.62	81.97
41	98	1.69	83.66
42	94	1.62	85.28
43	76	1.31	86.59
44	87	1.5	88.09
45	62	1.07	89.16
46	78	1.34	90.5
47	64	1.1	91.61
48	58	1	92.61
49	60	1.03	93.64
50	61	1.05	94.69
51	41	0.71	95.4
52	50	0.86	96.26
53	38	0.65	96.91
54	40	0.69	97.6
55	34	0.59	98.19
56	25	0.43	98.62
57	18	0.31	98.93
58	20	0.34	99.28
59	13	0.22	99.5

Teacher's Age	Freq.	Percent	Cum.
60	8	0.14	99.64
61	6	0.1	99.74
62	5	0.09	99.83
63	5	0.09	99.91
67	1	0.02	99.93
68	1	0.02	99.95
69	1	0.02	99.97
72	1	0.02	99.98
76	1	0.02	100
Total	5435	100	

## Appendix C

### *Weighted responses by Race*

Teacher's race/ethnicity	Freq.	Percent	Cum.
Hispanic, Asian	7	0.13	0.13
Hispanic, Asian, Native American	1	0.02	0.15
Hispanic, Asian, Native Hawaiian	1	0.02	0.17
Hispanic, Black	15	0.28	0.44
Hispanic, Native American	10	0.18	0.63
Hispanic, Native Hawaiian	7	0.13	0.76
Hispanic, White	244	4.49	5.24
Hispanic, White, Asian	1	0.02	5.26
Hispanic, White, Black	3	0.06	5.32
Hispanic, White, Black, Asian, Native Hawaiian, Native American	1	0.02	5.34
Hispanic, White, Black, Native American	1	0.02	5.35
Hispanic, White, Native American	1	0.02	5.37
Non-Hispanic, Asian	186	3.42	8.79
Non-Hispanic, Asian, Native American	1	0.02	8.81
Non-Hispanic, Asian, Native Hawaiian	3	0.06	8.87
Non-Hispanic, Black	450	8.28	17.15
Non-Hispanic, Black, Asian	1	0.02	17.16
Non-Hispanic, Black, Native American	5	0.09	17.26

Teacher's race/ethnicity	Freq.	Percent	Cum.
Non-Hispanic, Native American	119	2.19	19.45
Non-Hispanic, Native Hawaiian	25	0.46	19.91
Non-Hispanic, White	4295	79.03	98.93
Non-Hispanic, White, Asian	16	0.29	99.23
Non-Hispanic, White, Asian, Native American	1	0.02	99.25
Non-Hispanic, White, Asian, Native Hawaiian	1	0.02	99.27
Non-Hispanic, White, Black	7	0.13	99.39
Non-Hispanic, White, Black, Asian, Native Hawaiian	1	0.02	99.41
Non-Hispanic, White, Black, Native American	3	0.06	99.47
Non-Hispanic, White, Native American	28	0.52	99.98
Non-Hispanic, White, Native Hawaiian	1	0.02	100.00
Total	5435	100.00	



## Appendix D

### *Logistic Regression Analysis of Satisfaction at School and Induction Program Participation*

Table A		Odds Ratio	Std. Err.	z	P> z
1	Induction	1.416751	.1269185	3.89	**

Table B

1	Induction	1.416138	.1268831	3.88	**
2	Gender	1.026687	.097405	0.28	

Table C

1	Induction	1.415236	.1269069	3.87	**
2	Gender	1.028547	.0981661	0.29	
3	Age	1.000799	.0045735	0.17	

Table D

1	Induction	1.418317	.1272574	3.89	**
2	Gender	1.023063	.0979164	0.24	
3	Age	1.001257	.0046154	0.27	
4	BA	.8210831	.2368696	-0.68	

Table E

1	Induction	1.414926	.1270384	3.87	**
2	Gender	1.024389	.0981417	0.25	
3	Age	.9989776	.00471	-0.22	
4	BA	.8940612	.2597441	-0.39	

		Odds Ratio	Std. Err.	z	P> z
5	MA	.764957	.0798433	-2.57	*

Table F

1	Induction	1.415942	.1271448	3.87	**
2	Gender	1.036791	.1020992	0.37	
3	Age	.9988996	.0047107	-0.23	
4	BA	.884171	.257529	-0.42	
5	MA	.7680003	.0803672	-2.52	*
6	Grade	1.049651	.0966157	0.53	

Table G

1	Induction	1.418521	.1277307	3.88	**
2	Gender	1.037982	.1023142	0.38	
3	Age	.9988642	.0047119	-0.24	
4	BA	.8833397	.2573206	-0.43	
5	MA	.7676162	.0803358	-2.53	*
6	Grade	1.048496	.0966025	0.51	
7	Salary	.9999981	7.07e-06	-0.27	

Table H

1	Induction	1.418915	.1279339	3.88	**
2	Gender	1.038028	.1023231	0.38	
3	Age	.9988603	.0047123	-0.24	

		Odds Ratio	Std. Err.	z	P> z
4	BA	.883522	.2573914	-0.43	
5	MA	.767568	.0803351	-2.53	*
6	Grade	1.048346	.096622	0.51	
7	Salary	.9999981	7.07e-06	-0.27	
8	Policy Influence	1.004239	.0704986	0.06	

Table I

1	Induction	1.42085	.1281299	3.90	**
2	Gender	1.038542	.1023648	0.38	
3	Age	.9989438	.0047137	-0.22	
4	BA	.880966	.2567197	-0.43	
5	MA	.7668669	.0802816	-2.54	*
6	Grade	1.0477	.096565	0.51	
7	Salary	.999998	7.08e-06	-0.29	
8	Policy Influence	1.017361	.0722735	0.24	
9	Classroom Control	.9120594	.0827052	-1.02	

Table J

1	Induction	1.418536	.1280037	3.87	**
2	Gender	1.038807	.1024083	0.39	
3	Age	.9989649	.004714	-0.22	
4	BA	.8761963	.2555533	-0.45	

		Odds Ratio	Std. Err.	z	P> z
5	MA	.7681273	.0804522	-2.52	*
6	Grade	1.047995	.0966038	0.51	
7	Salary	.999998	7.08e-06	-0.28	
8	Policy Influence	1.023653	.07372	0.32	
9	Classroom Control	.9132482	.0828557	-1.00	
10	Supportive Admin	1.087462	.1747247	0.52	

Table K

1	Induction	1.424106	.1285961	3.92	**
2	Gender	1.039861	.102524	0.40	
3	Age	.9989978	.0047162	-0.21	
4	BA	.8748455	.2551449	-0.46	
5	MA	.7692925	.0806087	-2.50	*
6	Grade	1.046418	.0964697	0.49	
7	Salary	.9999985	7.07e-06	-0.22	
8	Policy Influence	1.002584	.0734323	0.04	
9	Classroom Control	.9150595	.0830518	-0.98	
10	Supportive Admin	1.102494	.1774923	0.61	
11	Supportive Parents	.8661244	.0796934	-1.56	

Table L

1	Induction	1.431074	.1293489	3.97	**
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		Odds Ratio	Std. Err.	z	P> z
2	Gender	1.039563	.1024943	0.39	
3	Age	.9988294	.0047175	-0.25	
4	BA	.8770221	.2558141	-0.45	
5	MA	.7691011	.0806089	-2.50	*
6	Grade	1.043868	.0962596	0.47	
7	Salary	.9999984	7.08e-06	-0.23	
8	Policy Influence	.9797538	.0738091	-0.27	
9	Classroom Control	.9146815	.0830167	-0.98	
10	Supportive Admin	1.174493	.1973669	0.96	
11	Supportive Parents	.8790916	.0814454	-1.39	
12	Recognition	.8532539	.1038204	-1.30	

Table M

1	Induction	1.430959	.1293392	3.96	**
2	Gender	1.0399	.102525	0.40	
3	Age	.9988282	.0047174	-0.25	
4	BA	.877847	.2560594	-0.45	
5	MA	.7688903	.0805907	-2.51	*
6	Grade	1.043356	.0962114	0.46	
7	Salary	.9999985	7.09e-06	-0.21	
8	Policy Influence	.9819784	.0741335	-0.24	

		Odds Ratio	Std. Err.	z	P> z
9	Classroom Control	.9147874	.0830503	-0.98	
10	Supportive Admin	1.170958	.1969066	0.94	
11	Supportive Parents	.8714981	.0824345	-1.45	
12	Recognition	.8508681	.1036567	-1.33	
13	Poverty	1.042727	.0964162	0.45	

\*p < .05    \*\*p < .01

## Appendix E

### *Logistic Regression Analysis of Would Do Again and Induction Program Participation*

Table A		Odds Ratio	Std. Err.	z	P> z
1	Induction	1.393906	.1301525	3.56	**

Table B

1	Induction	1.402191	.1310903	3.62	**
2	Gender	.7392009	.0702517	-3.18	**

Table C

1	Induction	1.381986	.1295176	3.45	**
2	Gender	.7746927	.0743014	-2.66	**
3	Age	1.019627	.0045042	4.40	**

Table D

1	Induction	1.386484	.1300287	3.48	**
2	Gender	.7688378	.0739641	-2.73	**
3	Age	1.020221	.0045427	4.50	**
4	BA	.7737754	.2173312	-0.91	

Table E

1	Induction	1.382036	.1296955	3.45	**
2	Gender	.7706843	.074218	-2.70	**
3	Age	1.018155	.0046413	3.95	**
4	BA	.8384437	.2374313	-0.62	

		Odds Ratio	Std. Err.	z	P> z
5	MA	.7836195	.0845695	-2.26	*

Table F

1	Induction	1.393511	.1310212	3.53	**
2	Gender	.8530526	.084446	-1.61	
3	Age	1.017457	.0046375	3.80	**
4	BA	.7648385	.2171767	-0.94	
5	MA	.8089537	.0876191	-1.96	
6	Grade	1.535764	.1527137	4.31	**

Table G

1	Induction	1.409685	.132967	3.64	**
2	Gender	.8598202	.0852586	-1.52	
3	Age	1.017201	.0046376	3.74	**
4	BA	.7590874	.2157448	-0.97	
5	MA	.8057201	.0872842	-1.99	*
6	Grade	1.525785	.15187	4.24	**
7	Salary	.9999875	7.78e-06	-1.60	

Table H

1	Induction	1.421238	.1343039	3.72	**
2	Gender	.8613587	.0854696	-1.50	
3	Age	1.017105	.0046391	3.72	**



		Odds Ratio	Std. Err.	z	P> z
4	BA	.763108	.2169445	-0.95	
5	MA	.8042718	.0871673	-2.01	*
6	Grade	1.520262	.1514205	4.21	**
7	Salary	.9999881	7.76e-06	-1.53	
8	Policy Influence	1.123214	.0826531	1.58	

Table I

1	Induction	1.419989	.1342081	3.71	**
2	Gender	.8612392	.0854727	-1.51	
3	Age	1.017054	.0046401	3.71	**
4	BA	.7649062	.2174491	-0.94	
5	MA	.8046646	.08721	-2.01	*
6	Grade	1.52105	.1515173	4.21	**
7	Salary	.9999883	7.76e-06	-1.51	
8	Policy Influence	1.11325	.0833463	1.43	
9	Classroom Control	1.073258	.1047293	0.72	

Table J

1	Induction	1.419698	.1342825	3.71	**
2	Gender	.8612708	.085479	-1.50	
3	Age	1.017056	.0046402	3.71	**
4	BA	.7642979	.2175601	-0.94	

		Odds Ratio	Std. Err.	z	P> z
5	MA	.8047811	.0872473	-2.00	*
6	Grade	1.521099	.1515258	4.21	**
		Odds Ratio	Std. Err.	z	P> z
7	Salary	.9999883	7.76e-06	-1.51	
8	Policy Influence	1.114029	.0845657	1.42	
9	Classroom Control	1.07341	.1047802	0.73	
10	Supportive Admin	1.009829	.177127	0.06	

Table K

1	Induction	1.427127	.1351016	3.76	**
2	Gender	.8622753	.0856049	-1.49	
3	Age	1.017158	.0046442	3.73	**
4	BA	.764064	.2174309	-0.95	
5	MA	.8067152	.0875255	-1.98	*
6	Grade	1.517547	.1512048	4.19	**
7	Salary	.9999891	7.75e-06	-1.41	
8	Policy Influence	1.079617	.0834183	0.99	
9	Classroom Control	1.076482	.105149	0.75	
10	Supportive Admin	1.027724	.1806093	0.16	
11	Supportive Parents	.8090744	.0786981	-2.18	*

Table L		Odds Ratio	Std. Err.	z	P> z
1	Induction	1.421118	.1346748	3.71	**
2	Gender	.8625632	.0856559	-1.49	
3	Age	1.017312	.0046485	3.76	**
4	BA	.7609438	.2166261	-0.96	
5	MA	.8065973	.0875187	-1.98	*
6	Grade	1.520687	.1515783	4.21	
7	Salary	.9999892	7.74e-06	-1.40	**
8	Policy Influence	1.101112	.0874925	1.21	
9	Classroom Control	1.07624	.1051562	0.75	
10	Supportive Admin	.9751653	.1780631	-0.14	
11	Supportive Parents	.7978598	.0783848	-2.30	**
12	Recognition	1.141183	.1412381	1.07	

Table M

1	Induction	1.421152	.1346825	3.71	**
2	Gender	.8625339	.085658	-1.49	
3	Age	1.017312	.0046485	3.76	**
4	BA	.7608769	.2166174	-0.96	
5	MA	.8066154	.0875222	-1.98	
6	Grade	1.520739	.1515928	4.21	**
7	Salary	.9999892	7.75e-06	-1.40	

		Odds Ratio	Std. Err.	z	P> z
8	Policy Influence	1.100918	.0876813	1.21	
9	Classroom Control	1.076227	.1051536	0.75	
10	Supportive Admin	.9754077	.1782642	-0.14	
11	Supportive Parents	.7983677	.0799766	-2.25	*
12	Recognition	1.141433	.1414782	1.07	
13	Poverty	.996867	.0961817	-0.03	

\*p < .05    \*\*p < .01

## References

- Achieve. (2013). *Implementing the common core state standards: The role of the secondary school leader*. Retrieved December 2016, from [http://www.achieve.org/files/RevisedSecondaryActionBrief\\_Final\\_Feb.pdf](http://www.achieve.org/files/RevisedSecondaryActionBrief_Final_Feb.pdf)
- Alliance for Excellent Education (2004). *Tapping the potential: Retaining and developing high quality new teachers*. New York, NY: Carnegie Corporation.
- Alliance for Excellent Education (2008). *Leading Gen Y teachers: Emerging strategies for school leaders*. New York, NY: Carnegie Corporation.
- Anderman, E. (1991). *Teacher commitment and job satisfaction: The role of school culture and principal leadership*. National Center for School Leadership.
- Anhorn, R. (2008). *The profession that eats its young*. Delta Kappa Gamma Bulletin.
- Barshay, J. (2014). *What makes for happier teachers, according to international survey*. Retrieved December 2016, from [http://educationbythenumbers.org/content/teachers-top-performing-countries-teach-less\\_1404/](http://educationbythenumbers.org/content/teachers-top-performing-countries-teach-less_1404/)
- Barnes, G., Crowe, E., and Schaefer, B. (2007). *The cost of teacher turnover in five school districts: A pilot study*. Washington, DC: National Commission on Teaching and America's Future.
- Bartell, C.A. (2005). *Cultivating high-quality teaching through induction and mentoring*. Beginning Teacher Mentoring 152 Thousand Oaks, CA: Corwin Press.

- Birkeland, S.E. and Moore Johnson, S. (2003). The schools that teachers choose. *Educational Leadership*, May 2003, Vol. 60, No. 8, 20-24.
- Blair-Larsen, S. M. (1998, summer). Designing a mentoring program. *Education*, 118(4), 602-604. Retrieved October 23, 2008, from EBSCO Publishing.
- Breeding, M., & Whitworth, J. (1999). Increasing *the success of first year teachers: A synthesis of three studies*. Paper presented at the annual meeting of the American Educational Research Association. Washington, DC. (ERIC Document Reproduction Service No. ED428056).
- Brock, B. L., & Grady, M. L. (2001). *From first-year to first-rate: Principals guiding beginning teachers*. Thousand Oaks, CA: Corwin Press, Inc.
- Cartolano, G.M. (2006). An evaluation of a Long Island district's new teacher induction program as perceived by beginning teachers. Teachers College, Columbia University.
- Clotfelter, C. T., Ladd, H. F., & Vigdor, J. L. (2007). How and why do teacher credentials matter for student achievement? *Urban Institute, National Center for Analysis of Longitudinal Data in Education Research*.
- Corcoran, E. (1981). Transition shock: The beginning teacher's paradox. *Journal of Teacher Education*, 32(3), 19-23.
- Danielson, L. (2002). Developing and retaining quality classroom teachers through mentoring. *Clearing House*, 75(4), 183-185.

- Darling-Hammond, L. (1999). *Teacher quality and student achievement: A review of state policy evidence. Center for the Study of Teaching and Policy.*
- Demirtas, Z. (2010). Teachers' job satisfaction levels. *Procedia-Social and Behavioral Sciences*, 9, 1069-1073.
- De Moura, G. R., Abrams, D., Retter, C., Gunnarsdottir, S. & Ando, K. (2009). Identification as an organizational anchor: How identification and job satisfaction combine to predict turnover intention. *European Journal of Social Psychology* 39(4), 540-557.
- Dopp, S.J. (2006). Aesthetic leadership: Stories of support, relationships, and success among novice teachers and school administrators. University of Nebraska.
- Feiman-Nemser, S. (2003, May). What new teachers need to learn. *Educational Leadership*, 60(8), 25-29.
- Ferguson, R. F., & Ladd, H. F. (1996). How and why money matters: An analysis of Alabama schools. In H. F. Ladd (Ed.), *Holding schools accountable: Performance-based reform in education*, 265–298.
- Fideler, E., and Haselkorn, D. (1999). Learning the roles: Urban teacher induction practices in the United States. Belmont, MA: Recruiting New Teachers, Inc.
- Fitzpatrick, M., Griswold, D. E., Kim, K. H., Lee, S. H., Liss, J. M., Nix-Williams, T., et al. (2006). Create effective mentoring relationships: Strategies for mentor and mentee success. *Intervention in School and Clinic*, 41(4), 233-240.

- Fox, S. M., & Singletary, T. J. (1986). Deductions about supportive induction. *Journal of Teacher Education*, 37(1), 12-15.
- Ganser, T. (1999). Reconsidering the relevance of Veenman's (1984) meta-analysis of the perceived problems of beginning teachers.
- George, J. M. & Jones, G. R. (1996). The experience of work and turnover intentions: interactive effects of value attainment, job satisfaction and positive mood. *The Journal of Applied Psychology*, 81(3), 318-325.
- Gregory, A. (1998). In through the out door? *Works Management*, 51(2), 16-19.
- Gold, Y. (1996). Beginning teacher support: Attrition, mentoring, and induction. In C. B. Courtney (Ed.) *Review of Research in Education*, 16, pp. 548-594. Washington, DC: American Educational Research Association.
- Gordon, S., & Maxey, S. (2000). *How to help beginning teachers succeed* (2nd ed.). Alexandria, VA: ASCD.
- Gray, L., & Taie, S. (2015). *Public school teacher attrition and mobility in the first five years*. National Center for Education Statistics.
- Grissmer, D., & Kirby, S. (1987). *Teacher attrition: The uphill climb to staff the nation's schools*. Rand Corporation.
- Grissmer, D., & Kirby, S. (1992). *Patterns of attrition among Indiana teachers, 1965–1987*. Rand Corporation.



- Grissmer, D., & Kirby, S. (1997). Teacher turnover and teacher quality. *Teachers College Record, 99*, 45–56.
- Hafner, A., & Owings, J. (1991). Careers in teaching: Following members of the high school class of 1972 in and out of teaching. *NCES Report No. 91-470*.
- Halford, J. M. (1998, February). Easing the way for new teachers. *Educational Leadership, 55*(5), 33-36.
- Harris, D. & Adams, S.J. (2007). Understanding the level and causes of teacher turnover: A comparison with other professions. *Economics of Education Review, 26*(3), 325-337.
- Haycock, K. (1998). *Good teaching matters*. Washington, DC: Education Trust.
- Hellman, C. M. (1997). Job satisfaction and intent to leave. *The Journal of Social Psychology, 137*(6), 677-689.
- Hirsch, E., Emerick, S., Church, K., & Fuller, E. (2006). *Teacher working conditions are student learning conditions: A report on the 2006 North Carolina Teacher Working Conditions Survey*. Carboro, NC: Center for Teaching Quality.
- Hoppock, R. (1935). *Job satisfaction*. New York, New York: Harper and Brothers Publishers.
- Huling-Austin, L. (1990). Teacher induction programs and internships. In W.R. Houston (Ed.), *Handbook of Research on Teacher Education* (pp. 535-548). New York: Macmillan and Association of Teacher Educators.
- Ingersoll, R. M. (2000). Turnover among mathematics and science teachers in the U.S. *Washington, DC: National Commission on Mathematics and Science Teaching*.

Ingersoll, R. M. (2001). Teacher turnover and teacher shortages: An organizational analysis. *American Educational Research Journal*, 38(3), 499-534.

Ingersoll, R. M. (2003). The teacher shortage: Myth or reality? *Educational Horizons*, 81(3), 146-152.

Ingersoll, R.M., & Kralik, J.M. (2004). The impact of mentoring on teacher retention: What the research says. *Educational Commission of the States*, 1-23.

Ingersoll, R.M., & Smith, T.M. (2003). The wrong solution to the teacher shortage. *Educational Leadership*, 60, 30-33.

Ingersoll, R.M., & Smith, T.M. (2004). Do teacher induction and mentoring matter? *NASSP Bulletin*, 88(638), 28-40.

Inman, D., & Marlow, L. (Summer, 2004). Teacher retention: Why do beginning teachers remain in the profession? *Education*, 124(4), 605-614.

Johnson, H. R. & Kardos, S. M. (2002, March). Keeping new teachers in mind. *Educational Leadership*, 59(6), 12-16.

Johnson, S. M., Birkeland, S. E., Donaldson, M. L., Kardos, S. M., Kauffman, D., Liu, E., & Peske, H. G. (2004). *Finders and keepers: Helping new teachers survive and thrive in our schools*. San Francisco: Jossey-Bass.

Kan, B. L. (2014). *How does teacher attrition compare to other professions?* Education Next. Retrieved April 1, 2016, from <http://educationnext.org/teacher-attrition-compare-professions/>.

Keller, B. (2007). New York shifts strategy on mentoring new teachers. *Education Week*, 27(7), 6.

Kim, I., & Loadman, W. E. (1994). *Predicting Teacher Job Satisfaction*.

Lee, T. W. (1988). How job dissatisfaction leads to employee turnover. *Journal of Business and Psychology*, 2(3), 263-271.

Little, J.W. (1990). The mentoring phenomenon and the social organization of teaching. In C.B. Cazden (Ed.), *Review of research in education*, 16 (pp. 297-351). Washington, DC: American Educational Research Association.

Locke, E. A. (1976) The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Chicago: Rand McNally

Lortie, D. (1975). *Schoolteacher: A sociological study*. Chicago: University of Chicago Press.

Luekens, M.T., Lyter, D.M., and Fox, E.E. (2004). Teacher attrition and mobility: Results from the teacher follow-up survey, 2000-01 (NCES 2004-301).

Marvel, J., Lyter, D.M. Peltola, P., Strizek, G.A, & Morton, B.A. (2007) Teacher attrition and mobility: Results from the 2004-2005 teacher follow-up survey (NCES 2007-307). U. S. Department of Education, National Center for Education Statistics. Washington, DC: U.S. Government Printing Office. Retrieved January, 2010, from <http://nces.ed.gov/pubsearch/pubsinfo.asp?pubid=2007307>.

Milanowski, A., & Odden, A. (2007). A new approach to the cost of teacher turnover. *Daniel J. Evans School of Public Affairs, University of Wisconsin*.

Murnane, R., Singer, J., Willett, J., Kemple, J., & Olsen, R. (Eds.). (1991). Who will teach?:

Policies that matter. *Cambridge, MA: Harvard University Press.*

Mutchler, S. E. (2000). Lessons from research on teacher mentoring: Review of the literature.

In Southwest Educational Development Laboratory (Ed.), *Mentoring beginning teachers: Lessons from the experience in Texas*. Austin, TX: Southwest Educational Development Laboratory.

National Association of State Boards of Education Study Group on Coordination and

Accountability in Teacher Education. (2000). *The full circle: Building a coherent teacher preparation system*. Alexandria, VA: National Association of State Boards of Education.

National Center for Education Statistics (1997). Retrieved April, 2010, from <http://nces.ed.gov/>.

National Center for Education Statistics (2000). Retrieved April, 2010, from <http://nces.ed.gov/>.

National Center for Education Statistics (2007). Retrieved April, 2010, from <http://nces.ed.gov/>.

North Central Regional Educational Laboratory (2001). Retrieved December, 2010, from

[http://www2.ed.gov/prog\\_info/Labs/index.html](http://www2.ed.gov/prog_info/Labs/index.html).

National Commission on Teaching and America's Future. (2007). *The high cost of teacher turnover*.

Norton, M., & Kelly, L. (1997). *Resource allocation: Managing money and people*. Larchmont, NY: Eye on Education.

Odell, S.J. (1989). Developing support programs for beginning teachers. In *Assisting the*

*Beginning Teacher* (pp. 19-38). Reston, VA: Association of Teacher Educators.

Otto, S. J., & Arnold, M. (2005). A study of experienced special education teachers' perceptions of administrative support. *College Student Journal*, 39(2), 253-259.

Pacific Resources for Education and Learning (1998). Retention and attrition of Pacific school teachers and administrators (RAPSTRA) study: Commonwealth of the Northern Mariana islands (CNMI). Office of Educational Research and Improvement, Washington, DC. Retrieved January, 2010, from <http://www.prel.org/products/Products/Kosrae-RAPSTA.pdf>.

Recruiting New Teachers, Inc. (2000). *A guide to developing teacher induction programs*. Belmont, MA.

Renard, L. (2003, May). Setting new teachers up for failure...or success. *Educational Leadership*, 60(8), 62-64.

Rice, J. K. (2003, August). Teacher quality: Understanding the effectiveness of teacher attributes. *Washington, DC: Economic Policy Institute*.

Rogers, D. L., & Babinski, L. M. (2002). From isolation to conversation: Supporting new teachers' development. *Albany, NY: State University of New York Press*.

Sanders, W. L., & Rivers, J. C. (1996). Cumulative and residual effects of teachers on student academic achievement. *Knoxville, TN: University of Tennessee Value-Added Research and Assessment Center*.

- Sargent, T. & Hannum, E. (2005). Keeping teachers happy: Job satisfaction among primary school teachers in rural northwest China. *Comparative Education Review*; 49(2), 173-204.
- Schlechty, P.C. & Whitford, B.L. (1989). Systemic perspectives on beginning teacher programs. *The Elementary School Journal*, 89(4), 440-449.
- Sergiovanni, T. J. (1995). *The principalship* (3rd ed.). Needham, MA: Allyn and Bacon.
- Shannon, G.S. & Bylsma, P. (2004). *Characteristics of Improved School Districts: Themes from Research*. Office of Superintendent of Public Instruction. Olympia, WA.
- Spector, P.E. (1997). *Job satisfaction: application, assessment, cause, and consequences*. Thousand Oaks, California: Sage Publications, Inc.
- Texas Center for Educational Research [TCER]. (2000). *The Cost of Teacher Turnover*. Austin, TX: Texas State Board for Educator Certification.
- Veenman, S. (1984). Perceived problems of beginning teachers. *Review of Educational Research*, 54(2), 143-178.
- Walsdorf, K. L., & Lynn, S. K. (2002, March/April). The early years: Mediating the organizational environment. *Clearing House*, 75(4), 190-194.
- Watkins, P. (2005). The principal's role in attracting, retaining, and developing new teachers: Three strategies for collaboration and support. *The Clearing House*, 79(2), 83-87.
- Weasmer, J., & Woods, A. M. (2000, January/February). Preventing baptism by fire. *Clearing House*, 73(3), 171-173.

- Williams, L.J. & Hazer, J.T. (1986). Antecedents and consequences of satisfaction and commitment in turnover models: A reanalysis using latent variable structural equation methods. *The Journal of Applied Psychology*, 71(2), 219-231.
- Wong, H. (2004, March). Induction programs that keep new teachers teaching and improving. *NASSP Bulletin*, 88, 41-58.